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THESIS

DEFENSE BUDGETING IN A CONSTRAINED ECONOMY: REENGINEERING THE BUDGET PROCESS TO MEET THE CHALLENGES OF A MODERNIZING ZIMBABWE DEFENSE FORCE

by

Charles R. Nhemachena

June 1998

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Robert E. Looney

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The Zimbabwe Defense Force faces a resource crisis that threatens capability to fulfill its mission to defend Zimbabwe's national interests. At the same time the National Defense Policy makes a commitment to modernize the force and the executive constantly echoes this through policy statements at various forums. The Zimbabwean economy's ability to sustain the modernization program is questionable given its failure to sustain the force in a period of low-level activity.

This paper examines ZDF's budgetary process to assess the prospects of reengineering it to meet the challenges of modernization in a constrained economy. A detailed description of the current process is presented and analyzed against relevant theory on policy analysis, reengineering, and contemporary budgeting systems, in particular PPBS.

The analysis concludes that in addition to reengineering, major strategic changes need to be made. In particular, inclusion of defense aspects in national development planning, adoption of a program or mission budgeting system, institution of the strategic planning process, evolution of an information technology strategy, and continuous improvement in human resource management would be fundamental to improvement in resource mobilization, planning and management.

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ABSTRACT

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LIST OF ABBREVIATIONS AND ACRONYMS

ADPU	Army Data Processing Unit
AFZ	Air Force of Zimbabwe
BGM	Budget Guidance Manual
BSO	Budget Submitting Animals
CAG	Comptroller and Auditor General
CDF	Commander Defense Forces
CPO	Central Payments Office
CRF	Consolidated Revenue Fund
DAPAR	Directorate of Army Pay and Records
DMRD	Defense Management Report Decisions
DoD	Department of Defence
DP	Directorate of Purchasing
DPG	Defense Planning Guidance
DPRD	Defense Planning Resources Board
GDP	Gross Domestic Product
GNP	Gross National Product
GPS	Government Printing and Stationery
GTB	Government Tender Board
GTC	General Tender Committee
HQ	Headquarters
JPAM	Joint Program Assessment Memorandum
MBO	Management by Objectives
MOD	Ministry of Defense
MOF	Ministry of Finance
NDP	National Defense Policy
NEPC	National Economic Planning Commission
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense

PAC	Public Accounts Committee
PBD	Program Budget Decisions
PC	Personnal Computer
PDM	Program Decision Memorandum
POM	Program Objective Memorandum
PPB	Planning Programming and Budgeting
PPBS	Planning Programming and Budgeting System
PSIP	Public Sector Investment Program
TQM	Total Quality Management
VFM	Value for Money
ZBB	Zero-Base Budgeting
ZDF	Zimbabwe Defense Forces
ZNA	Zimbabwe National Army
ZSC	Zimbabwe Staff College

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I. INTRODUCTION

A. BACKGROUND

Zimbabwe is currently undergoing a painful but necessary socio-economic transformation. Erratic economic growth, high budget deficit, spiraling debt, double-digit inflation, high interest rates, and rising unemployment are among the economic ills that characterize the economy. Such is the case despite very promising national development plans that have been proposed over the years.

In February 1981, the Government of Zimbabwe published its first policy statement since independence in 1980. The statement, *Growth with Equity,* identified government's main objective as that of achieving "a sustained high economic growth and speedy development in order to raise the incomes and standards of living of all our people and expand productive employment of rural peasants and urban workers, especially the former". This has remained government's objective as successive policy statements to date testify.[1]

In spite of government's objectives, poor economic performance persisted and some key economic targets were not met. These problems have been blamed on the various factors including the weather,[2] poor terms of trade and inappropriate monetary and fiscal policies. Although there is no consensus on the extent to which each of the above has contributed to the current situation, most of the blame tends to be laid on Zimbabwe's largely expansionary fiscal policies, in particular the high budget deficit. These problems have resulted in calls for government to reduce expenditure so as to create conditions for economic growth without negating its commitment to improving the general welfare of the population. The bureaucracy and the military are therefore major targets for reduction in light of the "non-productive" and, with particular reference to the military, the "discretionary" nature of their expenditures. The national budget, as a mechanism for allocating the nation's scarce resources, can be manipulated to achieve

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[1] These subsequent policy statements were: *Transitional National Development Plan (1982/83 to 1984/85), Transitional National Development Plan (1985/86 to 1988/89), Framework for Economic Reform (1991 to 1995), Zimbabwe Program for Economic and Social Transformation (ZIMPREST-1996 to 2000)*

[2] Zimbabwe is mainly an agro-based economy. Its GDP growth rate depends largely on the performance of the agricultural sector. Poor rainfall in 1992 and 1995, for example, had a serious negative impact on the economy.

this end. Achieving the right balance in the allocation of scarce resources among competing national goals, however, poses the biggest challenge to policy-makers. It is in this respect that the efficacy with which the budgetary process is crafted and executed can make a significant contribution.

Within the Zimbabwe Defense Forces (ZDF), the budgetary process can also be instrumental in mobilizing, allocating and managing resources efficiently. The budgetary process in this case goes beyond the "simple" determination of how much will be allocated to whom and for what purposes. As this thesis will argue, ZDF's experience of the budgetary process has been limited, at least in practice, to this narrow view. There was a conspicuous absence of innovative ideas and focused commitment to take on the challenges that were posed by a deteriorating economic environment and the reduction in real terms of the budget allocations for defense. Perhaps part of the blame for this situation lies in ZDF's preoccupation with other pressing challenges such as transforming a semi-professional to a professional force and operational duties. ZDF's background discussed below will help to put some of its problems into perspective.

ZDF was formed at Zimbabwe's independence in 1980 when the former Rhodesian Army was integrated with former guerilla armies (Zimbabwe African National Liberation Army and Zimbabwe People's Revolutionary Army). This resulted in the size of the Army soaring from the existing Rhodesian Army strength of 15,000 to about 70,000.[3] This phenomenal growth was to be sustained at the same level of resources, as Government had to deal with other pressing welfare issues such as education and health.

The new ZDF[4] had to contend with shortage of accommodation, barrack-room equipment, motor vehicles, uniforms and other resources. Training, which was the major focus during the integration process, also put a heavy strain on the now meager resources. The inability to avail more resources to match the growth in demand meant that current resources would decrease at an increasing rate. At the human resource level, training to

---

[3] Zimbabwe (known as Rhodesia before independence) attained its independence from Britain on 18 April 1980 after a liberation war that lasted for about 14 years. While there was low activity between 1966 and 1971, the war intensified from 1972 until the 1979 when the cease-fire that was negotiated as part of the independence settlement came into effect. The then Prime Minister, Robert Mugabe, proclaimed a policy of reconciliation that entailed among other things, power-sharing (although this was not a constitutional requirement) and the formation of a "Zimbabwe National Army" from the former adversaries.

achieve the same professional standards among soldiers with varied military backgrounds was intensified. The leadership had to transform from guerilla to professional military leaders. The challenges that the leaders faced in mobilizing resources and managing them efficiently were enormous, for this would affect the effectiveness with which the military would play its role in safeguarding Zimbabwe's national security interests.

In line with this role, ZDF was to be engaged in internal security operations from early 1982 to 1987. Despite the relatively small enemy force, the guerilla tactics it employed called for extensive deployment and a disproportionately large commitment of resources. Between 1985 and 1993, ZDF was engaged in operations in Mozambique to safeguard Zimbabwe's communication lines to the Mozambican ports. ZDF has also been participating in peacekeeping operations since 1991 to date. From its formation up to about 1993, more emphasis was placed on operations and the provision of resources in the short-term at the expense of building capacity for the future. Where long-term procurement was made, questions of justification, transparency and accountability were often raised. The requirement for efficiency and accountability in the management of resources had, inadvertently or otherwise, been relegated to the "back stage".

Chronic resource problems are now manifesting themselves in the form of shortage of the most basic requirements such as food and uniforms, and the termination of utility services (lights, water, telephone services) due inadequacy of funds. Other resources, such as vehicles for unit administration and operational duties, weapon systems, unit and barrack-room equipment are either in short supply or out-dated, and in some cases both in short supply and outdated. There is little evidence that over the years, a strategy was being evolved to avert the deteriorating trend in military capability that could seriously constrain ZDF's role in safeguarding Zimbabwe's national interests. If there was one, then the current situation, which at best can be described as a crisis, proves that such strategy has so far been ineffective. Only recently have steps been taken to downsize the ZDF in an effort to avert the crisis.

Despite this situation, calls for reduction in defense spending are all the more vociferous. Given these circumstances, the challenge to achieve ZDF modernization in

---

[4] ZDF is made up of the Zimbabwe National Army (ZNA) and the Air Force of Zimbabwe (AFZ). Integration of the forces was initially focused on the ZNA. The problems discussed in this part were therefore most pronounced in the ZNA.

the near future is certainly an uphill task. This challenge requires ZDF to take a critical look at its shortcomings in the areas of policy analysis and resource planning and management in search of innovative ways to maximize efficiency. Such a review would lay the groundwork for improving planning capacity; development of feasible, cost-benefit justified programs; and improving management and operational processes.

The problems alluded to above are inextricably linked to the ZDF budgetary process. This thesis argues that by improving the budgetary process, prospects for achieving modernization are significantly enhanced. It is necessary therefore, to examine the current budgetary process if meaningful suggestions are to be proposed. This thesis will show that the current ZDF budgetary process has major shortcomings among which are the following:

- To a great extent it is not based on credible, rationally justified programs or missions.
- Budgeting is viewed as an end and not as a means to an end. Once funds are appropriated, there is no deliberate effort to assess the efficiency with which they are used.
- Management of the budget focuses on structure rather than processes.
- Attempts to improve the budgetary system are based on marginal, incremental changes that have little impact on ZDF's capacity to achieve economy, efficiency and effectiveness.

It will be argued that nothing short of a strategic approach and reengineering will be required effectively deal with the problems ZDF currently faces. The thesis contributes to efforts to resolve these problems by reviewing the entire the budgetary process from a management perspective, and making suggestions for improvement.

B. PURPOSE

The purpose of this thesis, therefore, is to examine the ZDF budgetary process and assess the prospects for reengineering it to meet the challenges of its modernization goal.

C. SCOPE AND METHODOLOGY

This study is concerned with the entire budgetary process and for this purpose, the budgetary process includes all activities necessary to effectively and efficiently mobilize, allocate and manage resources.

A literature review on policy and economic aspects was conducted in order to provide an appropriate frame of reference for discussing the current ZDF budgetary process. The discussion on the current process was based on a review of organizational literature, Zimbabwe government statutes, and the writer's experience. This was complemented by surveys conducted among the key players in ZDF, and among Zimbabwean legislators, and by interviews with subject matter experts. Information from the above was analyzed to assess the prospects for reengineering the budgetary process.

A qualitative model based on a logistical process is presented to illustrate how reengineering might contribute to efficiency improvement within the ZDF budgetary process. A general analysis of the structure of the ZDF budget will also be made to illustrate some of the problems in the process. Otherwise the study is descriptive in nature, and for this reason, it sets a framework for anyone intending to conduct an in-depth quantitative study of the ZDF budgetary process to focus detailed analysis (including modeling) on specific issues identified as problematic.

Note should be taken, however, on the limitations of the study. Firstly, distance made it difficult to obtain certain material, especially concerning budget reviews by the Comptroller and Auditor General's (CAG) Department. For the same reason, it was not possible to conduct face to face interviews that could, in some cases, have been more appropriate. Administration of the survey also proved to be a big hurdle in that the urgency attached to the study by agents was of less priority than that attached to it by the author. However these shortcomings were not so significant as to render the conclusions unsubstantiated.

D. ORGANIZATION OF STUDY

The remainder of this thesis is broken down into five chapters. Chapters II and III give the theoretical foundations for this study based on literature review. Chapter IV

describes how the current system operates, and the analysis is given in Chapter V. Conclusions and recommendations are then presented in Chapter VI.

Chapter II deals with policy aspects of defense budgeting. The defense policy implications on the budgetary process are addressed first. This is followed by discussion on the economic implications and the role of policy analysis. The chapter ends with the development of budgeting systems including some lessons learnt from the implementation of such systems.

Chapter III reviews theory of the "reengineering" process. First, the concept of reengineering is defined to put it into perspective relative to other management techniques for improving efficiency and instituting effective change in organizations. The reengineering principles are discussed next, followed by the process itself. The final part of the chapter then addresses the role of information technology, and reengineering in the public sector.

Chapter IV reviews ZDF's current budgetary process. This includes Zimbabwe's defense policy implications on the budget, government budgeting as a regulatory framework, ZDF budgeting policy framework, budget formulation, negotiation, appropriation, implementation, and review. Results of surveys are then presented to complete the picture not only from a theoretical and documentary point of view, but from a process practitioners' point of view as well.

Chapter V provides an analysis of the discussion above. It seeks to identify opportunities for reengineering the ZDF budgetary process and includes discussion on policy and institutional improvements, selected process improvements, and a reengineering approach to improvements model.

The final part of this thesis, Chapter VI, presents the conclusions and recommendations.

II. POLICY ASPECTS OF DEFENSE BUDGETING

A. DEFENSE POLICY IMPLICATIONS ON THE BUDGETARY PROCESS

The foundation of all nations is based upon national values, those most cherished principles upon which the existence of states are based. These national values form the basis of national interests which states will use all their might to safeguard. Arlinghaus and Barker posit that "all sovereign states have four fundamental national interests in common; survival, territorial integrity, maintenance and enhancement of economic wellbeing, and the promotion of a favorable world order".[5]

National security policy is developed to promote and safeguard the national interests from perceived threats, whether internal or external. National security therefore, is concerned not only with the state's ability to use or threaten the use of physical force, but with its ability, for example, to provide food to all its citizens (i.e. food security). The state's national security strategy will therefore comprise a number of specific security objectives, including defense policy objectives.

Defense policy, as G. M. Dillon observes, "plays an influential role in constructing and reconstructing the political community by mediating its internal as well as its external relations through the threat and use of force".[6] The state is able to bargain in the international arena because it can back its demands by the threat or use of force, be it offensively or defensively. Likewise, in the domestic arena, the state's monopoly over the legitimate use of force enables it to maintain order while carrying out functions for the wellbeing of its members.

The above would hold true if the military is perceived as being in fact capable of exercising such force. The military's capability is therefore critical for it to play its appropriate role, particularly in the competitive regional and international arena. Readiness, modernization, force structure, and sustainability are considered to be the four "pillars" of military capability.[7]

---

[5] Keith A Dunn and William O Staudenmaier, Strategy for Survival Foreign Policy 52 (Fall 1983) 22-40. Cited in African Armies: Evolution and Capabilities (Westview Press, 1986) ed. Bruce E. Arlinghaus and Pauline H. Barker, 3.

[6] G. M. Dillon, Defense Policy Making: A Comparative Analysis (Leicester University Press, 1988) 1.

[7] Richard K. Betts, Military Readiness: Concepts, Choices, Consequences (Washington DC: The Brookings Institution, 1995) 37. According to the Government Accounting Office Report B-217229 dated May 1990,

1. Readiness

Readiness may be viewed as the immediate ability of the military forces to execute their combat missions. The military forces include manpower, units, their weapon systems and equipment. Of note is the fact that readiness involves both speed (how soon a force is capable to respond to a threat) and effectiveness.

Betts criticizes the "official definition" that tends to emphasize on the speed factor, and he correctly observes that "unless it can ensure that the battle is decided on the first day, a force that could fight spectacularly for one day but would collapse on the second is no more ready in any meaningful sense than is one that could not fight as well but could fight longer".[8]

On the other hand, a force that cannot accomplish its combat mission (i.e. lacks effectiveness) regardless of the speed with which it can deploy cannot be considered to be ready. Combat effectiveness is a product of mass and efficiency, where mass is "the basic organized capital stock, human and technical, of a military force", and efficiency "is the degree to which units can realize their maximum potential performance".[9]

From the above it may be noted that readiness is inseparable from the other three "pillars", modernization, force structure and sustainability. These are defined below.

2. Modernization

Modernization refers to the sophistication of the forces' equipment and weapon systems. This invariably involves procurement of new equipment and weapon systems or modification of existing ones. It also calls for "modernization" of the manpower that is supposed to operate and service the enhanced weapon systems and equipment.

Modernization also involves improvement in management systems associated with the new or modified weapon systems and equipment, and attention needs to be paid to such aspects as cost-benefit analysis, cost-effectiveness analysis programming, budgeting, procurement, financial management, information technology etc. It may also be necessary to extend the modernization beyond the military to include improvement of

---

DoD defines military capability as the ability of the force to achieve a war-time objective such as winning a battle or war or destroying a target in terms of these four "pillars".

[8] Betts, 37.

[9] Betts, 39.

local industrial capacity to produce defense goods, as long as this would be efficient in meeting national security objectives.

3. Force Structure

Force structure refers to the numbers, size and composition of the units constituting the military forces. This is determined by, among other things, the concept of operations determined from analysis of the threat, weapon systems and equipment to be employed, reserve and mobilization capability, and capacity to fund the adopted structure.

There is also need to achieve the right balance between operational and supporting service units/personnel. Effectiveness is compromised where for example, in the process of downsizing, the military focuses on retention of operational units at the expense of service support. Some essentially "non-military" roles (e.g. Pay-roll administration) could also be "civilianized" to achieve savings without sacrificing service.

4. Sustainability

Sustainability is the capacity to maintain the military forces performing combat missions over a long period of time. This calls for a sound logistical system, also modernized in terms of equipment, information technology/systems, inventory management techniques, training and other management systems.

Existence of shortages to meet general and training requirements and war reserves seriously curtails the readiness of the military force and its ability to withstand an adversary in prolonged conflict. Capacity to sustain the military force cannot be achieved efficiently (if at all) within a short time, let alone during a period of conflict escalation.

5. Link Between Defense Policy and the Budget

A nation's capacity to meet defense policy objectives depends, to a large extent, on its ability to fund defense programs such as acquisition of weapon systems and equipment, training, and operational missions. Low investment in such programs might lead to failure to achieve the capability to meet those objectives. On the other hand, too high an investment might be harmful to the economy and would therefore militate against achievement of other national security goals (e.g. economic wellbeing).

An optimal defense policy therefore, requires consideration of the cost of meeting objectives. These cost go beyond that of procuring materiel and includes the cost of the various processes and outcomes that contribute to overall military capability.

Funding the defense budget is required both for local and foreign procurement. Countries without significant defense industries rely mostly on imports for their equipment and weapon systems. Sub-Saharan Africa is a case in point.[10] Defense policies normally address these issues which have a bearing on whether objectives will be met through local resources, foreign currency reserves or foreign aid.

At he local level it is important for defense forces to implement efficient management policies and systems to ensure that defense policy goals are, as far as is possible, met. The defense policy formulation process should also result in objectives that are not overstated in terms of the nation's economic capacity. This highlights the need to consider economic and policy implications of the budgetary process.

B. ECONOMIC IMPLICATIONS AND POLICY ANALYSIS

1. Economic Aspects of the Defense Budget

Defense expenditure is often a target for critics of governments' fiscal policies. It is there for necessary to understand the reasons for such concerns. This section discusses the "public good" nature of defense expenditure and its impact on economic growth.

a. Defense as a Public Good

One of the problems associated with allocating resources to defense is its "public good" nature. By definition, public goods are commodities or services that are consumed jointly. When provided to a single member of a community they are also made available to all others.[11] The problem that arises is; who is willing to pay for a good that will be consumed by all others? After all the utility of the good is different for different people.

By providing the good to one person, it is impossible to prevent those who are unwilling to pay for it from enjoying its benefits. As a result the market system cannot lead to optimal production of national defense even if it is in society's interest to

[10] South Africa, however is the only country in the region with a well developed defense industry.
[11] Gwartney, James D. et.al. Macroeconomics: Private and Public Choice The Dryden Press, (Florida, 1995) 98.

have the service provided.[12] Given the conflict between self- interest and the public interest of economic efficiency that these arguments present, government has to intervene and provide the public goods. The amount that government would be willing to pay for a particular public good like defense will depend on a number of competing goals within its overall national security strategy. The impact of defense expenditure on economic growth is particularly pertinent in determining the level of defense expenditures.

b. Impact of Defense Expenditure on Economic Growth

Following on from the "guns and butter" analogies, conventional wisdom has it that military expenditure is harmful to the economy as it consumes resources that could otherwise be used in the productive sector and in enhancing human capital. Since the end of the cold war, the "peace dividend" advocates in particular, have been reinforcing this argument. There is no general consensus, however, on whether defense expenditure has a positive or negative impact on the economy, and this bears testimony to the complexity of the subject. This section summarizes some of the major arguments that have been made on the subject

One of the major arguments that have been advanced against defense expenditure is the crowding out effect. Within the government budget itself, defense competes with other government programs such as health and education. A more than proportionate increase in defense spending may lead to a relative reduction in other programs. In the absence of additional revenue, the alternative for financing such expenditure would be borrowing either from the foreign or domestic market. Local borrowing leads government to compete with the private sector for scarce financial resources from the money market. This results in the "crowding out" of the private sector, and money that would otherwise be used for investment is used for public consumption. In a study of 50 least developed countries, Deger concluded that "an increase in the defense burden leads to a decrease in the growth rate through decline in the saving rate, a fall in investment per unit of capital, and a fall in human capital formation".[13]

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[12] Olvey Lee D. The Economics of National Security Avery Publishing Group (New York, 1984) 9-10.
[13] Saadet Deger, Military Expenditure in Third World Countries: The Economic Effects (London, Boston and Henley: Routledge and Keegan Paul, 1986) 244-245.

Looney argues that contrary to conventional wisdom, recent empirical research on third world economies suggests that under certain circumstances, increased levels of defense expenditure can enhance economic growth.[14] He makes reference to other scholars, (Benoit, and R Faini, P. Annez and L. Taylor) who among others, have shown that defense expenditure may actually stimulate growth by increasing aggregate demand, and this additional demand translates into more production by the private sector, and lower unemployment among other benefits.

Benoit also argues that defense programs of most countries make tangible contributions to the civilian economies as follows:[15]

- Feeding, clothing and housing a number of people who would otherwise have been fed, clothed and housed by the civilian economy.
- Providing education and medical care as well as vocational and technical training that may have high civilian utility.
- Engaging in a variety of public works.
- Engaging in technical and scientific specialties and defusing such skills to the civilian economy.
- Deger lends support to this argument by showing that "there are direct and indirect ways in which high defense expenditure may have spin-off effects on employment and the creation of human capital".[16] Yet another study by Kohler showed that a well-equipped and trained army in the African context could induce additional investment through its security enhancing effects.[17]

In the final analysis, economic considerations cannot be the sole basis upon which the level of defense expenditure is based. Each country's national security strategy based on perceived threats will be a major determinant. This argument notwithstanding, the need to ensure efficiency in defense programs through the use of economic and other analyses cannot be over emphasized.

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[14] Robert E. Looney, The Economics of Third World Defense Expenditures (Greenwich, Connecticut: JAI Press Inc., 1994)
[15] Deger, 188.
[16] Deger, 116.
[17] Looney, 112. He refers to Daniel F Kohler, The Effects of Defense and Security on Capital Formation in Africa: An Empirical Investigation (Santa Monica, CA: Rand Corporation, September 1988)

2. Policy Analysis and Evaluation

The debate on the impact of defense expenditure on the economy underscores the need to ensure that defense related public policy analysis affords the decision-makers an opportunity to make efficiency maximizing decisions. The capacity to evaluate the policies is important in determining the extent to which particular policies or programs are implemented based on stated guidelines, and whether policies cause change in the intended direction.[18] Policy analysis and evaluation are critical not only at the national level but at sub-national levels as well.

By definition, public policy analysis "is a systematic approach to making policy choices in the public sector. It is a process that generates information on the consequences that might be expected to follow the adoption of various policies. Its purpose is to assist policymakers in choosing a preferred course of action from among complex alternatives under uncertain conditions".[19] When applied to defense, the effect of such analyses is likely to have a significant impact on the stakeholders' perceptions about the value of defense expenditure and may influence how national resources are allocated in the future.

Howard E Freeman defined comprehensive policy evaluation as evaluation in which "appropriate techniques and ideas have been brought to bear so that it is possible to determine whether or not a program, intervention or treatment is carried out as planned, and to assess whether or not the program resulted in changes or modifications consistent with the intended outcomes".[20] The intended outcomes of both policy analysis and evaluation are the same. For the purpose of avoiding redundancy, further discussion below will refer mostly to policy analysis, and this may be used interchangeably with policy evaluation.

a. Rationale for Policy Analysis

Weimer and Vining set out two broad categories of rationale for public policy, namely: Market failures to improve efficiency in the production and allocation of

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[18] See Nachmias, David Public Policy Evaluation (St Martin's Press: New York, 1979) for a discussion on process and impact evaluation, also known as comprehensive evaluation.
[19] Warren E. Walker and Gene H Fisher, "Public Policy Analysis" Encyclopedia of Operations Research and Management Science ed. Saul I. Gass and Carl M Harris, (Boston, Dordrecht and London: Kluwer Academic Publishers, 1996) 526-528.
[20] Nachmias, 7.

resources and goods, and the reallocation of opportunity and goods to achieve distributional and other values.[21] The nature of public goods provides discrepancies in which Pareto efficiency cannot be achieved. Public policy then intervenes to "correct" the discrepancies so as to achieve efficiency.

Policy analysis may be used for a variety of purposes among which are: as an aid to decision-making, to evaluate the direct and indirect impacts of policy, and as a problem assessment and monitoring tool.[22] The most common use of policy analysis is as a decision-making aid.

According to Bozeman, "the decision tool variety of policy analysis is generally the most stylized and rigorous application of policy analysis and includes techniques such as cost-benefit analysis, public choice modeling, operations research, simulation, gaming, and other techniques generally rooted in mathematics".[23] Such analysis is usually best suited to situations where, among other things, the problem can be stated unequivocally, variables are conveniently quantifiable, value of costs and benefits over time can be determined, and there is a function to be maximized or minimized. The difficulty of ascertaining relevant values however, has often been used as excuse for preferring intuitive rather than quantitative policy analysis.

Evaluating the impacts of policy is yet another important use of policy analysis. One approach to such evaluation is to use the same techniques used in arriving at the decisions, but using the actual data. Economic approaches such as the cost-benefit analysis are particularly useful in determining indirect impacts in unintended consequences. Another useful approach is program evaluation, which is mostly based on experimental or quasi-experimental design. Program evaluation seeks to replace the impressionistic approach with one based on scientific approach.

As an assessment and monitoring device, policy analysis helps to establish benchmarks and critical indicators. Benchmarking enables the organization to compare its output with organizations doing similar things. For example, output in a government vehicle workshop may be compared to an International Standards Organization certified

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[21] David L. Weimer, and Aidan R. Vining Policy Analysis: Concepts and Practice (New Jersey: Prentice Hall, 1992) 30-111.
[22] Barry Bozeman, Public Management and Policy Analysis (New York: St Martin's Press, 1979) 265-281
[23] Ibid

vehicle workshop in the private sector. By establishing critical indicators, the organization will be prompted to make timely intervention and so avoid failure in meeting its goals.

Despite the importance of policy analysis as confirmed by its "universal" acceptance in public organizations, it sometimes fails to achieve the intended results. This is the case particularly when it is used to provide "evidence" for decisions that would already have been made, or for "shooting down" programs that would have fallen into political disfavor.[24] Policy analysis also fails for political reasons, and due to lack of capacity for conducting or interpreting it. At the political level, "higher interests" (e.g. national) may be subordinated to "lower interests" (e.g. organizational, class, and self-interests) to the extent that excuses are given for ignoring results of such analyses, or for not conducting the analyses in the first place. The fact that policy analysis is only an aid in the decision-making process also provides opportunity for making sub-optimal choices. These limitations may be mitigated where organizational leadership is committed to adopt such programs to improve efficiency in resource planning and management. Such commitment can only result in positive outcomes provided the organization has the capacity to conduct effective policy analysis and evaluation. Development of such capacity is discussed below.

b. Developing Capacity

Organizations may choose to have in-house policy analysts, to rely on consultants, or to rely on a mix of the two.[25] The option selected will have a bearing on policy analysis skill requirements. There is also need to avail data and other resources that are critical to any effective policy analysis. In the final analysis, leadership must be focussed and committed to the tenets of efficiency and effectiveness.

Generally there are two skill levels that are relevant to effective policy analysis: the skill to comprehend analysis already conducted, and the skill to conduct the analysis. The first skill level is required for all staff responsible for making policy decisions. Often it is the lack of such skill that leads to reliance on intuitive analysis for

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[24] Ibid, 267.

[25] Policy analysis is recognized as an emerging "profession" and many public organizations now have positions titled "policy analyst". Some policy analyst positions were referred to as economists, program

lack of an organizational framework that fosters rational analysis. The second skill level would be typical of consultants, but where an organization is committed to policy analysis without the resources to rely on consultants, employing staff to work as analysts may develop in-house capacity. The size of the organization and the complexity of problems that have to be dealt with, have to be considered when determining the organizational framework for policy analysis. Whatever framework is adopted, no policy analysis can be effectively conducted without good data.

Downs and Larkey observed that "in spite of enormous volumes of data they generate each year, governments have a very incomplete, distorted, and often unusable record of their past activities. The data required to get a start on learning what causes what, or on forecasting the consequences of various actions do not often exist."[26] Among the reasons they attribute the poor information base is the fact that little priority and inadequate resources are given to collecting and storing data.

Provision of resources for policy analysts is another area that needs attention. In addition to manpower and data related constraints, resources such as information technology can assist to speed up the analysis process, and may in some cases prove to be indispensable. The problem that has to be overcome in ensuring efficiency improvement is, as Downs and Larkey contend, that "government has no resources to save resources".

c. Implications for Resource Planning and Management Policies

Few organizations, if any, can boast of an unconstrained resource base. Governments in particular are under constant pressure to cut their budgets due to scarcity of resources. The different levels of budget allocations to various programs represent policy statements about national values and perceived efficient allocation of national resources. It is important therefore, for government to adopt measures that enhance capacity for conducting policy analysis to ensure that resource allocation is consistent with national values and interests.

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evaluators, budget analysts, statisticians, operations researchers etc. There are also professional bodies such as the Association of Public Policy Analysis and Management that regulate the profession.

[26] Downs, George W and Larkey, Patrick D The Search for Government Efficiency (Temple University Press: Philadelphia, 1986) 1st ed. 243.

The same analogy applies at department (e.g. defense) level. Important messages can be communicated through budgets and other management systems put in place to achieve efficient management of resources. The continual development of budgeting systems may be viewed as a quest to achieve that end.

C. DEVELOPMENT OF BUDGETING SYSTEMS

The evolution of budgetary systems has generally followed a trend from being based on political/incremental decision-making, to decision making based on systematic analysis and planning. In general government budgetary systems are complex and fragmented. Perhaps this may be explained by the fact that as budgeting systems evolved over the years, governments have tended to adopt only those elements of the new system that are consistent with their individual goals.

Some key features of different budgeting systems are discussed below. The Planning Programming and Budgeting System (PPBS) is discussed in more detail to highlight application of policy issues and provide a basis for comparison with the ZDF budgeting system.

1. Traditional/Incremental Budgeting

Incremental budgeting is a system that uses the previous budget as the basis for determining the current one. Incremental changes are made to the previous budget to take account of such things as new programs and changing priorities. Aaron Wildavsky suggests that incremental budgeting is based on the concepts of *base* and *fair share*.[27] The *base* represents those programs that all participants consider legitimate for the respective departments, and which do not therefore need intensive scrutiny. On the other hand, *fair share* "reflects a convergence of expectations on roughly how much an agency is to receive in comparison to others".

The merit of this approach is that it simplifies calculation. Calculation, according to Wildavsky, involves a study of how problems arise and are identified; how they are broken down to manageable dimensions; how they relate to one another; how

[27] Wildavsky, Aaron B. The New Politics of the Budgetary Process (Addison-Wesley Educational Publishers Inc. 1997) 45-53. See also Budgeting: A Comparative Theory of Budgetary Processes (Little, Brown and Company Inc. Canada 1975) 5-9.

determinations are made of what is relevant; and how the actions of others are given consideration.[28]

2. Zero-Base Budgeting

Zero-Base Budgeting (ZBB) involves a review of all programs considered for funding. Even continuing multi-year programs are subject to review and further justification in light of prevailing circumstances. The fact that a program has been authorized by statute is also not prima facie justification for automatic funding.

Premchand summarized the major features of ZBB as follows:[29]

- Programs are evaluated at different levels of resource allocation and performance. Such levels may be categorized as "minimum, intermediate, current, and enhancement".
- Objectives are formulated for each agency.
- Activities of each agency are converted into decision packages (or program categories) which are developed to show performance at various resource levels.
- Decision packages are then evaluated and arranged at each level of management by ranking order.
- Line or management officials have a role in budget making, ranking of programs etc. consistent with the MBO approach.

As noted by Premchand, the strength of ZBB lies in its giving equal attention to the base as well as increments to the base, and it takes into account the changing levels of resource availability.

3. Performance Budgeting

Performance budgeting arose from the realization of the shortcomings of the accounting and control approach to budgeting. This approach enabled the bureaucracy to keep track of where the funds were allocated and how they were spent, but it did not account for efficiency in the budgetary process itself. Concern thus shifted to managerial efficiency of the budget process.

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[28] Wildavsky, The New Politics of the Budgetary Process, 43.

[29] A. Premchand Government Budgeting And Expenditure Controls: Theory and Practice (Washington DC: International Monetary Fund, 1983) 335.

When recommending the adoption of performance budgeting, the Hoover Commission report noted that "such an approach would focus attention upon the general character and relative importance of the work to be done, or upon the service to be rendered, rather than upon things to be acquired, such as personal services, supplies, equipment, and so on".[30] Emphasis was laid more on activities performed rather than inputs in order to help the administrators evaluate the work efficiency of operational units. Downs and Larkey give an example of how this might apply to the postal service. Major categories of the budget structure might change from personnel, equipment, capital projects etc, to mail pickup, mail processing, mail delivery etc. Efficiency data within each of these categories would then be presented to determine efficiency levels expected e.g. number of letters sorted per employee-hour or cost of delivery per package.[31]

Performance budgeting, it was hoped, would instill an efficiency focus in the policy makers, and that it would be possible to monitor efficiency across agencies on the assumption that efficiency was a function of agency effort. Difficulties were, however, encountered in formulating the productivity or efficiency index. The system also exposed the bureaucrats to criticism if they failed to meet performance criteria, hence their resentment of the system. The process also required professional staff such as economists and statisticians, and information systems that would enable the technocrats to quantify their agency productivity goals.

At the budgeting level no dramatic benefits were derived from the new system. Administrators, however, had recognized the need for and begun to implement management procedures that would assist in the efficient management of public resources.

4. Planning Programming and Budgeting System

The Planning, Programming and Budgeting System (PPBS) originated from a project that was instituted to advise the US Air Force about research development and planning.[32] While PPBS was initially conceived as a US Department of Defense (DoD) system, other government departments later adopted it with varying degrees of success.

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[30] Downs, George W and Larkey, Patrick D The Search for Government Efficiency (Temple University Press: Philadelphia, 1986) 149. Cited from the *Commission of the Organization of the Board, 1949 p 8.*
[31] Ibid.

Its aim was "to specify and (if possible) to quantify the objectives of spending programs, to determine whether the benefits of a program are likely to exceed the costs, and to minimize the net costs of achieving the specified objectives."[33]

a. The Fundamentals of PPBS

According to Alain Enthoven and Wayne Smith, six basic ideas motivated the PPBS "experiment" and they are given below.[34]

- The need to develop criteria for assessing defense needs and evaluate the adequacy of existing programs.
- The need for top decision-makers to base their decisions on rationally developed alternatives.
- The need for evaluating needs and costs together.
- The need for commitment to financial planning.
- The need for analysis and analytic staff to play a major role in directing the budgetary choices.
- The need for analysis to be open and explicit.

The above ideas recognized the need to develop a system where decisions would be based on a rational analysis of policy choices, and where planning provided for better coordination. This would enhance the capacity to manage scarce resources effectively and, more importantly, the organization would be better placed to make optimal contribution to national security goals.

At the operational level PPBS, contained five elements: 1) A program structure in terms of missions, forces, and weapon and support systems. 2) The analytical comparisons of alternatives. 3) A continually updated force structure and financial program. 4) Related year-round decision making on new programs. 5) Progress reporting to test the validity and administration of the plan.[35]

Bozeman outlines the basic steps in PPBS. The first step in implementing PPBS is the grouping of activities into " program packages". These in turn are broken

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[32] Ibid 151. This project was spearheaded by Rand Corporation, an organization that had been created in 1946 to bring together former wartime analysts to advise the Air Force.
[33] Bozeman, Barry Public Management and Policy Analysis (St Martin's Press: New York, 1979) 233.
[34] Downs and Larkey make reference to two analysts who held positions in both RAND and the Defense Department.
[35] Bozeman, 153. Cites *Novick, 1965, p 89.*

down into "programs" which consist of "elements". The second step is to develop a measure of output and effectiveness, and in the third step, costs and benefits are analyzed and the program elements with the lowest net costs identified.[36] He further identifies "three types of documents central to the budget under PPB". These are; *program memorandum, program and financial plan, and analytic studies.* The program memorandum states the goals of the agency, and the rationale for its activities. The program and financial plan provides data on projections of costs and output for each program for a five-year period. The analytic studies provide the policy analysis base of PPB.

Critics of this system contend that the volume of paper work generated by PPBS "suffocated" the system. This made the budget process itself costly in terms of effort required relative the commitment of the decision makers, in particular at the political level. The system did not achieve as much success in government agencies as it did in the military. Larry Jones and Glenn Bixler argue that "perhaps the reason why PPBS has served the policy development and planning needs of DoD resource decision-making while it floundered in other federal agencies is that the process was developed specifically for defense, where many program and budget decisions are made on the basis of assessing alternatives and where quantitative data are available and amenable to the application of the tools of economic cost/benefit analysis, operations research, and other sophisticated analytical methodologies".[37] The review of the application of PPBS in DoD that follows will help to set the comparative framework for further discussion on reengineering the ZDF budget.

Thomas A Simcik provides a detailed description of how PPBS operates in the DoD in general, and in the Navy in particular.[38] This section summarizes the key elements he identifies in the process, and draws on other literature as indicated. A PPBS overview is discussed followed by discussion on the three major phases in the process; planning, programming and budgeting.

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[36] Bozeman, 233.

[37] Larry R. Jones and Glenn C. Bixler, Mission Budgeting to Realign National Defense *Research in Public Policy Analysis and Management Vol. 5* (Connecticut: JAI Press Inc., 1992) 20.

[38] Thomas A Simcik, Reengineering the Navy Program Objective Memorandum (POM) Process Thesis submitted in partial fulfillment of the requirements of the degree of Master of Science in Management from the Naval Postgraduate School, December 1996.

b. Overview

PPBS was implemented to improve the decision-making process in the planning, allocation and management of resources. The system is objective driven and seeks to provide optimal strategies for meeting those objectives. From the national security objectives, a strategy to meet those objectives is developed. Requirements are then estimated and programs developed to meet that strategy. Finally, budgets are formulated to meet the costs of approved programs.

c. The Planning Phase

Four major strategy steps are identified and these are:

- Identification of national interests.
- Examination of the world security environment.
- Defining the national military strategy.
- Planning force structure.

National security interests are articulated at the executive level following input from various stakeholders. These national security interests form the basis of the national security strategy, and the president is required by statute to promulgate such strategy.[39] The national security strategy spells out, among other things, the executive's political, economic and defense strategies.

Examination of the world security environment is done as part of an assessment of short, medium and long-term threats to national security interests. Foreign policy commitment to international treaties and alliances (e.g. NATO) and defense policy objectives are major considerations in this assessment.

In defining the national military strategy, a four-step process is followed as follows:

- Ideal force level is determined assuming the absence of resource constraints.
- Pragmatic resource constraints are then applied.
- Optimal force level under those constraints is determined.
- Risk is assessed and strategy is adjusted as necessary.
- The process is undertaken to ensure that defense policy objectives are met.

[39] This is required in terms of Section 603 of the Goldwater-Nichols Defense Department Reorganization Act.

Planning of force structure provides the basis for the programming phase. The planning decisions are documented in the form of guidance and provide staff with the framework for determining the allocation of resources.

The culmination of the planning phase is production of the Defense Planning Guidance (DPG). The DPG, which is issued to the services by the Secretary of Defense, covers "threats and opportunities, policy, strategy, force planning, resource planning, and fiscal guidance, and includes a summary of major policy issues".[40] An important feature of the planning process is that there is a high level of consultation such that when the services receive the DPG, their input would have been taken into account. The DPG facilitates subsequent programming and budgeting activities within the services.

d. The Programming Phase

The programming phase translates the DPG into program packages that are presented in the form of multi-year financial plans. Each service is responsible for developing its own programs in a process that typically involves program planning and appraisal, program development, and program decision and appeals. The culmination of the programming phase is the production of Program Objective Memorandum (POM).

The POMs are biennial recommendations made by the services to the Secretary of Defense, and they include programs planned for a six-year period. Each intervening year is used to review and update the POMs, while the last four years are used as a starting point for updating the next POM after taking into account new initiatives and planning guidance. POMs are scrutinized at joint-staff level and merged into the Joint Program Assessment Memorandum (JPAM). The JPAM is then analyzed by the Office of the Secretary of Defense (OSD) staff before submission for program decisions to the Defense Planning Resource Board (DPRB) which is chaired by the Secretary of Defense.[41] The DPRB decisions are issued in the form of Program Decision Memoranda (PDM), and these provide the basis for the budgeting phase.

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[40] L. R. Jones and G. C. Bixler, 21.

[41] Such boards are also effective at the service level, for example the Navy has a "Resources and Requirements Review Board" and when the Board sits to consider both Navy and Marine Corps programs, it is the "Integrated Resources and Requirements Board".

e. The Budgeting Phase

The programs invariably result in demands for more financial resources than can be made available. The budgeting phase therefore seeks to ration the limited financial resources across and within military departments in line with planning and programming decisions.

In the case of the Navy, the Budget Guidance Manual (BGM) and other issue-specific memoranda and notices guide the budget formulation process. The Budget Submitting Offices (BSOs) submit their estimates for internal review by Navy Comptroller budget analysts. The budget analysts conduct hearings to gain more understanding of the budgets they are reviewing, and they examine the estimates submitted to ensure that they conform to recent guidance and do not put the resources at risk.

Budgets for all services are submitted for joint review by OSD and Office of Management and Budget (OMB) staff. [42] The Secretary of Defense then conducts hearings in conjunction with OSD and OMB staff, and he formulates his Program Budget Decisions (PBD) and Defense Management Report Decisions (DMRD). PBDs provide alternatives to service proposals while DMRDs seek to achieve economies and efficiencies though improved business practices, consolidation of efforts and improved management practices.

5. Management by Objectives

The adoption of the management by objectives (MBO) concept in budgeting is an extension of the normal management functions of planning and control. MBO is believed to have been widely used in the private sector from as far back as 1954.[43] Chester Newland identified the following as the key elements of MBO:[44]

- Setting goals, objectives, and priorities in terms of results to be accomplished in a given time.
- Developing plans for the accomplishment of results.

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[42] OMB is the organization in the President's office tasked with advising the president on budget related issues and, under his direction, compiling the budget that will be submitted to Congress.

[43] A leading management theorist, Peter Drucker, introduced the concept of Management by Objectives (MBO) as far back as 1954.

[44] Chester Newland, MBO Concepts in the Federal Government *The Bureaucrat,* 2, 4 (Winter 1974) 354-361, in Bozeman, 234-235.

- Allocating resources in terms of established goals, objectives and priorities.
- Involving people in implementation of plans, with emphasis on communication for responsiveness and on broad sharing in authoritative goals and objectives.
- Tracking and monitoring of progress towards goals and objectives, with specific intermediate milestones.
- Evaluating results in terms of effectiveness (including quality), efficiency and economy.
- Generating and implementing improvements in objectives and results, (increasing productivity through improved technology, better utilization of technology etc.).

Bozeman notes that the chief distinction between MBO and PPB is the relative flexibility of the two techniques. MBO can be used in conjunction with any other techniques (e.g. cost-benefit analysis) and can be structured in any number of ways according to the needs and constraints of the organization. It is however, primarily a management technique that can be adapted for the budgeting role. For these reasons therefore, MBO is does not impose across departments, as serious an obligation on systems analysis as does PPB.

6. Lessons from Implementation of Budget Reforms

Premchand's study of selected industrial and developing countries provides some important lessons on the implementation and evaluation of budget innovations. [45] He makes some general observations discussed below.

No single system can be said to be in operation in any one country. If anything, countries operate "a family of systems" in which selected features from different systems are applied given their relevance and feasibility. There are, however, several common features in the systems adopted and these include classification of activities (or programs), specification of objectives, and evaluation of efficiency.

Implementation of budget reforms has generally been difficult and in some cases half-hearted. The problems in most developing countries in particular, "cannot be

[45] See Premchand's detailed comparative analysis covering the following countries: United States of America, United Kingdom, France, Canada, Sweden, Tanzania, India, Malaysia, Nepal, Philippines and Sri Lanka. He also includes the United Nations in his study.

disassociated with the plethora of problems associated with extensive needs and low capacities...(and these include) lack of training facilities, shortage of skilled workers, inadequate phasing, disillusionment with excessive paper-work, non-utilization of the information generated, utilization of the information for strengthening centralized controls, lack of adequate involvement of spending agencies, lack of proper hybridization of some techniques" and over-ambitiousness. The lag in the implementation of reforms in relation to other supplementary systems such as accounting and reporting also negates the benefits of reform.

In the final analysis, Premchand observes that the complex nature of public management problems could hardly be solved by the traditional budgeting system. While budget innovations do not provide the panacea to such problems, they at least offer viable alternatives to current systems that are responsive to the dynamic challenges faced by both public and private sector organizations.

As highlighted above, implementation of reforms is fraught with difficulties. Various management techniques to deal with reforms in the quest for improved efficiency and productivity are evolving. These techniques take a holistic approach due to the realization of potential benefits from integration of subsystems. One such management technique, *reengineering,* is attracting considerable attention because of breakthroughs it has resulted in for some private and public sector organizations. Because of its potential for making organizations realize "dramatic improvements", reengineering is discussed in the next chapter with a view to later assessing its value in improving the ZDF budgetary process.

III. REENGINEERING

The rapidly changing economic environment has forced most organizations to revisit the way they conduct business. For the private sector concern has mainly been on the need to survive in the face of fierce competition. As Hammer and Champy note, "the three Cs - Customers, Competition and Change - have created a new world of business."[46] The public sector, on the other hand, faces mounting pressure to reduce its expenditure and so reduce the deficits that characterize most of national economies. The bottom line is that all organizations are concerned with issues of optimizing efficiency by ensuring that their processes enable them to satisfy their customers at the least possible costs. Processes that do not add value are being eliminated.

Literature abounds on programs that organizations embark on in order to realize their goal of staying ahead of the competition. These include restructuring, downsizing, rationalization of operations, de-layering, total quality management (TQM), reinvention, and reengineering among others. The most recent concept to attract much attention is "reengineering". Michael Hammer pioneered the concept in 1990 when he presented a paper entitled *Reengineering Work: Don't Automate, Obliterate.*[47] He championed the concept through further research and publications with James Champy and Steven A. Stanton.[48] The critical role that management plays in reengineering prompted him to publish *Reengineering Management.*[49]

The classical management scholars (the likes of Adam Smith and Frederick Taylor) championed the concept of breaking-down work into simple tasks in order to achieve specialization and hence improve productivity. Reengineering involves arranging these tasks into coherent processes each of which adds value to the organization while taking into account behavioral aspects.

The arguments presented by Hammer and his co-authors, Champy and Stanton, form the basis of this thesis' review of the reengineering concept. A related concept

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[46] Hammer, Michael and Champy James Reengineering the Corporation: A Manifesto for Business Revolution (HarperBusiness: New York, 1993) 1st ed., 24.
[47] Michael Hammer, "Reengineering Work: Don't Automate, Obliterate" Harvard Business Review, Summer, 1990.
[48] Michael Hammer and Steven A. Stanton, The Reengineering Revolution: A Handbook (New York: HarperBusiness, 1995)

which is the precursor to reengineering, "total quality management" (TQM), is also reviewed so as to contrast the new thinking in the quest for efficiency in both private and public sector organizations.

A. DEFINITION

Hammer and Stanton define, reengineering as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in performance".[50] Further elaboration on this definition will help to put the concept into proper perspective.

Reengineering involves the most basic yet far reaching aspects of business processes. Quite often people tend to concentrate on the complicated aspects at the expense of the fundamental issues that give rise to those complicated issues. Hammer and Champy give examples of some basic questions consistent with *fundamental rethinking*; Why do we do what we do? Why do we do it the way we do? The reengineering approach avoids taking things for granted, and thus avoids overlooking non-value-adding processes.

Another characteristic of reengineering is that it entails *radical redesign* of processes. As the authors note, "radical redesign means disregarding all existing structures and procedures and inventing completely new ways of accomplishing work".[51] It is a fundamental departure from the traditional approach of incremental changes and, for this reason, entails substantial risk taking.

The risk premium is the *dramatic improvement* that is expected to result from the reengineering exercise. Whereas incremental changes normally result in marginal improvements, reengineering, if done correctly, is supposed to result in "quantum leaps in performance". Hammer and Champy suggest that if only marginal improvement is desired, then there is no need for reengineering.

Finally, reengineering involves the redesign of *processes.* A process is defined as a series of tasks that together create value for the customer. It is considered to be the

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[49] Michael Hammer, Reengineering Management (New York: HarperBusiness, 1995)
[50] Hammer and Stanton, p 3.
[51] Hammer and Champy, p 33

"heart" of every enterprise yet most organizations continue to lay emphasis on functional rather than process management.

B. REENGINEERING PRINCIPLES

Michael Hammer's 1990 paper proposed seven principles of reengineering as follows:

- Organize around outcomes, not tasks.
- Have those that use the output perform the process.
- Subsume information processing work into the real work that produces the information.
- Treat geographically dispersed resources as though they were centralized.
- Link parallel activities instead of integrating their results.
- Put the decision point where the work is performed.
- Capture information at its source.

In line with the above principles, Hammer and Champy observed certain characteristics that typify reengineered processes and they are discussed below.[52]

Several jobs combine into one. This involves the integration and compression of tasks so that the individual employee has more responsibility for a process. Individuals with responsibility for the end to end process are referred to as 'case workers' and, where they work in teams, as 'case teams'. Hammer and Champy argue that the pay-offs of this approach include; the elimination of errors, delay, and rework; empowered employees who are innovative, creative, and require less supervision. Employees, it is argued, take responsibility for making sure that the customers' requirements are met on time and with no defects.

Workers make decisions. The vertical compression of tasks reduces the hierarchical decision-making layers to the extent that employees have more decision-making opportunities. As Hammer and Champy put it, "instead of separating decision-making from real work, decision-making becomes *part* of the work". They argue that the benefits that accrue from this characteristic include fewer delays, lower overhead costs, better customer response, and greater empowerment for workers.

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[52] Hammer and Champy, 50-64

The steps in the process are performed in natural order. Reengineering results in processes that follow natural order instead of the sequential "straight jacket" approach where for example the work of one (step 2) cannot start before that of the other (step 1) ends. While some processes may dictate that this be the case, in most circumstances there is scope for concurrent or parallel processing of work. Step 2 for example could commence as soon as there is enough information from Step 1 to get it going. This simultaneous processing results in increased speed in completing jobs, and avoids the inconveniences of rework that would otherwise result from intervening changes between the start of first job and the next.

Processes have multiple versions. This characteristic entails a shift from standardization to a situation where multiple versions of the same process are the norm. This is necessary to meet the challenges of the changing environment. The main benefit is the ability to tailor the process to meet individual customer requirements.

Work is performed where it makes the most sense. The focus on organizational structure rather than processes results in work being performed sub-optimally. Placing too much emphasis on specialization (as in traditional organizations) without due regard to specific circumstances can end up being a costly exercise. Purchasing systems are replete with examples where the cost of acquiring goods and services do not warrant over-emphasis in specialization.

Controls are reduced. Reengineering seeks to eliminate non-value-adding activities. Reengineered processes should result in controls being used only to the extent that they make economic sense. Rather than focussing on the need for more controls, the process itself should have in-built incentives against the anticipated problems.

Reconciliation is minimized. Reconciliation is another non-value-adding activity which reengineering seeks to minimize. By reducing the number of contact points that the process has, chances of inconsistent data are reduced and hence the need for reconciliation.

A case manager provides a single point of contact. Where processes are unavoidably complex, a case manager provides the link between customers and such processes. This is also consistent with the need to reduce the number of contact points referred to above. The case manager will shield the customers from the complexity of

processes while providing information that could have been provided by the individuals actually running the process. An integrated information system is critical to success in this role.

Hybrid centralized/decentralized operations are prevalent. Information technology is instrumental to realizing the benefits of both centralization and decentralization. For example, a centralized database could benefit autonomous departments/divisions whether they are centrally located or geographically dispersed.

Hammer and Champy provide the above characteristics as "examples" of characteristics exhibited by most of the organizations (success stories) they studied. The innovative nature of the reengineering process may well lead to different approaches and even better designed processes. The changes that occur when an organization reengineers are important to note:[53]

- Work units change from functional departments to process teams.
- Jobs change from simple tasks to multi-dimensional work.
- People's roles change from controlled to empowered.
- Job preparation changes from training to education.
- Focus of performance measures and compensation shifts from activity to results.
- Advancement criteria change from performance to ability.
- Values change from protective to productive.
- Managers change from supervisors to coaches.
- Organizational structures change from hierarchical to flat.
- Executives change from scorekeepers to leaders.

C. REENGINEERING PROCESS

Success in implementing the reengineering process requires committed leadership good organization, and an analytical, creative approach. Hammer and Champy discuss these issues at length and this section summarizes the key points. The section is arranged into five parts dealing with:

- Organization and leadership.

[53] Hammer and Champy, 65-82.

- Identifying and selecting processes to be reengineered.
- Understanding the processes and process redesign.
- Strategies for implementation.
- Reasons for failure.

1. Organization and Leadership

Five roles that have been instrumental in achieving reengineering success are the leader, process owner, reengineering team, steering committee, and reengineering 'czar'.

Leader. The leader is normally "a senior executive who authorizes and motivates the overall reengineering effort". The leader inspires employees through a well-articulated vision of what the organization will look like after the reengineering process and, through shared values and beliefs, motivates them towards an unequivocal mission. Beyond communicating a common sense of purpose, the leader should create an environment where barriers to reengineering, personnel or otherwise, can be dealt with swiftly. The leader will present the first barrier if he does not understand the full purport of reengineering, or if he exhibits wavering commitment to the process. Where the organization intends to reengineer only a part of it (e.g. department), the designated leader might be someone lower than the chief executive, but high enough to be in effective control of resources used in that department's process.

Process owner. This is "a manager with responsibility for a specific process and the reengineering effort focussed on it". In function oriented organizations, there are often no managers who are responsible for a whole process. Processes normally cut across functional boundaries and so it will be necessary to appoint process managers or designate process owners for each process. In the reengineering process, the identified process owner assembles the reengineering team and provides the team with leadership in order to realize its goal.

Reengineering team. Reengineering teams perform the core of the reengineering process. The teams are essentially self-directed and they produce the ideas and are often required to see to the implementation of the reengineering process itself. Team members consist of insiders and outsiders. The insiders are people currently working in the process and bring with them valuable experience about the current flaws in the organization. Their main shortcoming however is the possibility that their familiarity

with the system might hamper creative thinking. Outsiders, on the other hand, are those from outside the current process and they bring objectivity to the team.

Steering committee. Appointment of a steering committee is optional. This could be made up of senior managers (not necessarily process owners) who are responsible for the overall strategy of the reengineering program within the organization. The committee deals with such issues as prioritization of reengineering projects and resolving problems on allocation of resources and conflict that is necessarily a part of the process.

Reengineering 'czar'. The reengineering 'czar' provides strong support to the leader who is often not able to devote a lot of time to the day-to-day management of the reengineering effort. His two main functions are enabling and supporting each process owner and reengineering team, and coordinating all ongoing reengineering activities. The reengineering 'czar' should preferably have experience in previous reengineering projects, but care should be taken to ensure that he does not take-over the role of the leader and process owner who are in charge. Hammer and Champy emphasize that "the work of reengineering has to be the line manager's job".

2. Identifying and Selecting Processes to be Reengineered

Most traditional organizations are organized according to functions and not processes. People are therefore more familiar with the former. Since reengineering is concerned with redesigning processes and not functions, the identification of processes becomes paramount. Hammer and Champy suggest a technique that makes use of a "process map".

The process map is more like the organizational chart except that it charts the processes not the functions. A good starting point might be to describe the processes by their start and end points. For example, procurement might be identified as "need specification to delivery". Sub-processes would then be identified from this such that instead of having only the high-level process maps, you also have lower-level process maps. Simplicity is a key requirement for such maps, despite the challenges that arise from cutting across functional boundaries.

Once the process maps are designed, the next stage is to choose the processes to reengineer. Hammer and Champy suggest three criteria and these are broken processes, important processes and feasible processes.

Broken processes. Some processes are conspicuously dysfunctional to the extent that it this "common knowledge" among an organization's executives and even the lower-level employees. Often the symptoms are very clear and it is the diseases that need to be diagnosed. One of the examples given illustrate this point is as follows:

Symptom:	Extensive information exchange, data redundancy, and re-keying.
Disease:	Arbitrary fragmentation of a natural process.

Important processes. The important processes are determined by their impact to customers, both internal and external. Since each organization's mission invariably has to meet the needs of its customers, customers themselves provide invaluable input for determining the processes that fail to "deliver the goods".

Feasible processes. The likelihood of success of the reengineering effort must be taken into account when deciding whether to reengineer or not. Suggested factors to be considered include the scope, cost, and leadership commitment. Scope requires striking the right balance between the expected pay-off and the likelihood of success. The wider the scope of activities the greater the pay-off, but the lower the likelihood of success. The costs are also critical because reengineering may entail investment in, for example, high technology. In the final analysis however, reengineering cannot be feasible if leadership is not committed to the reengineering cause.

3. Understanding the Process and Process Redesign

Before the reengineering team can proceed to redesign the process, the members need to understand the process first. Detailed analysis of the current system is not critical since reengineering seeks to "start on a clean slate". It might be necessary however, to go into some detail to justify the need for change. Understanding the process entails knowing process customer requirements and what the process currently provides.

The redesign stage demands creative thinking by team members. There is no set formula or steps to be followed in determining how best the processes should be configured. The principles already discussed and common sense should guide the teams to come up with effective processes.

4. Strategies for Implementation

The problems of managing change have received extensive attention and the lessons learnt from such studies equally apply to the major changes that are necessarily a part of reengineering. Hammer and Champy emphasize two messages that were developed by companies that have had the most success in selling change to their employees. The first message is about "where we are as a company and why we can't stay here" and the second, "what we as a company need to become".

Employees need to be convinced of the urgency of the current situation and why it is not conducive to survival. A "case for action" must be unequivocally made, and the argument for change must be compelling for the employees to embrace reengineering as the only salvation. In developing this argument, management also takes a critical look at the organization and this may also result in other issues normally taken for granted being addressed.

The second message entails articulating the organization's "vision" of where the organization needs to be. It provides a rallying point for all employees and a challenging yet feasible goal to attain.

The above issues point to the need for a comprehensive implementation strategy. Failure to "sell" the need for and benefits of reengineering will render any attempt to reengineer futile.

5. Reasons for Failure

Hammer and Stanton review the most commonly made mistakes in reengineering and they list the top ten as follows:[54]

- Don't reengineer but say that you are.
- Don't focus on process.
- Spend a lot of time analyzing the current situation.
- Proceed without strong executive leadership.
- Be timid in redesign.
- Go directly from conceptual design to implementation.
- Reengineer slowly.
- Place some aspects of the business off limits.

[54] Hammer and Stanton, 33.

- Adopt a conventional implementation style.
- Ignore the concerns of your own people.

The underlying problem they note however is that "people engaged in the reengineering effort don't know what they are doing". Another important facet of reengineering is information technology.

D. THE ROLE OF INFORMATION TECHNOLOGY

Technology plays a crucial role in reengineering organizations. It should be noted however, that on its own, automation does not necessarily improve the way a process works. It might improve the speed with which a process is completed without improving the process itself. Hammer and Champy view information technology as an "essential enabler" for reengineering and argue that "modern state of the art information technology is part of any reengineering effort."[55] The rate of technological change and the ever-growing number of applications increase the scope for applying technology in the reengineering process.

E. REENGINEERING IN THE PUBLIC SECTOR

Public sector organizations are increasingly adopting practices common in the private sector. The nature of competition and need for survival have forced the latter to strive for innovative and efficient ways of providing for customers lest they lose them to their competitors and go out of business. On the other hand, the public sector is responding to the ever-diminishing resources by adopting those techniques that enable them to achieve more with fewer resources, and thus ensure "survival".

Various techniques have been tried to improve productivity in the public sector. For example, the evolution of budgeting techniques like MBO, ZBB, and PPBS sought to build-in features that would enhance efficiency and effectiveness in the allocation and use of resources. Despite these efforts, no *dramatic improvements* have been made in public sector performance, and this explains why new initiatives in this respect are viewed with skepticism. Of late, public institutions are increasingly turning to quality management as

[55] Hammer and Champy, 83.

a solution to public sector performance problems.[56] Process reengineering too, is beginning to receive attention in the public sector's continuing search for excellence. The ensuing discussion reviews some of the key aspects of the application quality management and reengineering in the public sector.

The total quality management (TQM) concept emerged in the early 1980s. It is regarded as both a philosophy and set of principles that guides organizational transformation through continual improvement of the organization, improvement of customer satisfaction, proper management of human resources, and use of quantitative analysis to improve services.[57] TQM is credited with the success of a large number of Japanese and American corporations. Cases of failed attempts to use TQM as a vehicle for improvement also abound, and the experience with both success and failure has resulted in valuable lessons being learnt. Robert Cole proposed the following elements of success in implementing TQM programs.[58]

- Sustained top management leadership for the quality initiative and active application to their own daily management activities.
- A relentless focus on the customer both in setting strategic objectives and in building organizational routines that link as many units and levels in the firm as possible to identifying and meeting customer needs.
- Systematically improving the quality of all business processes from an internal and external customer perspective.
- A decentralization of decision-making responsibility to a well-trained labor force.
- A breaking down of organizational barriers, departments, and levels so that cross-functional management becomes normal operating procedure.
- A combined emphasis on both incremental continuous improvement and break through strategies.
- A realigning of reward and measurement systems, both formal and informal, to support these new directions.

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[56] Albert C. Hyde "Quality Reengineering and Performance: Managing Change in the Public Sector," The Enduring Challenges in Public Management eds. Arie Halachmi and Geert Bouckaert (San Francisco: Jossey-Bass Publishers, 1995) 150-176

[57] Hyde, 179.

TQM shares some common features with reengineering although the two are not the same. The decision to embark on any or all of them is a major strategic decision and calls for a deliberate strategic plan which includes such issues as articulating the organization's vision and adoption of a common sense of purpose, stakeholder analysis, analysis of strengths, weaknesses, opportunities and threats (SWOT analysis), selection of a course of action among alternatives, and implementation strategies. Other significant features common to both are, the crucial role of leadership, focus on process improvement, customer focus, good human resource management, and decentralization of decision-making and employee empowerment.

One major difference between TQM and reengineering is that unlike reengineering, TQM seeks continual, long-term, incremental improvements. It focuses on "doing things right" first time, and implementation is also usually organization wide. Reengineering on the other hand is a short-term strategy for getting the organization on the right path and it seeks dramatic improvements while focusing on "doing the right things". Implementation may also occur across the whole organization or selected processes may be reengineered at different times.

Hyde argues that quality management and reengineering can be "a viable approach for improving productivity and performance in the public sector".[59] It is apparent that the two concepts are not in conflict. If any thing more benefit may be derived from implementing the two. A decision has to be made on whether to implement either of the programs first, or to implement both simultaneously. Public sector organizations that have made strides in implementing TQM are likely to be better prepared to embrace reengineering since the two have a number of features in common. On the other hand, the organizations that have yet to attempt to implement TQM might need to put more effort and commitment to make reengineering work.

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[58] Hyde, 171.
[59] Hyde, 172.

IV. THE CURRENT BUDGETARY PROCESS

The major influences on the ZDF budgetary process are Zimbabwe's National Defense Policy (NDP)[60] and government's regulator framework through its budgetary process. The extent to which NDP objectives are realized may be enhanced or constrained by the Government budgetary process. It may also be the case that formulation of NDP objectives is done oblivious of the constraining factors within the Government budgetary process. This underscores the need to examine the two (NDP and Government budgetary process) in order to identify constraints to the achievement of defense modernization objectives.

This chapter will also examine the following: ZDF budgeting policy framework, budget formulation, appropriation, negotiation, implementation, and review. The final part of the chapter presents the results of a survey conducted to identify potential for improvement in the budgetary process.

The discussion describes the ZDF budgetary process and through examples and cases, illustrates some of its inherent weaknesses. This provides a basis for analyzing in the next chapter, opportunities for improvement in general, and through process reengineering in particular.

A. ZIMBABWE'S DEFENSE POLICY IMPLICATIONS ON THE BUDGET

In its broadest sense, Zimbabwe's NDP is based on a "defensive strategy". The NDP document identifies the following as its "three key elements":

- Defense of sovereignty and national interests.
- Participation in the creation of a common regional security regime.
- Contribution to international peace and stability.

The NDP provides an assessment of the "Strategic Security Environment" in the global, regional and domestic context and makes "certain judgements that will naturally affect our defense policy". The conclusions are as follows:

- There is no immediate conventional strategic military threat of an armed attack against Zimbabwe.

[60] The latest "National Defense Policy" was published in 1997 replacing an earlier publication in 1989.

- There is no immediate threat to Zimbabwean interests at home and abroad that will require the deployment of the Defense Forces.
- There is a low risk of a military threat developing in the region that will necessitate the deployment of the Defense Forces in the short and medium term.
- There is a likelihood of contributing troops, resources permitting, on international peace keeping and humanitarian relief operations in the region and on the continent.

The NDP notes Government's acknowledgement that "security environments are by their nature unpredictable and subject to rapid change". There is need therefore, to maintain an effective defense capability to respond any such eventuality. This has a bearing on; how Zimbabwe's Defense Forces should be structured and equipped to enhance capability, the economy and resource constraints, and the general structure of the ZDF budget in relation to the economy.

1. Enhancing Zimbabwe Defense Forces (ZDF) Capability

The NDP emphasizes the need to enhance defense capability through "a well motivated, well trained and well equipped Defense Force".[61] This is considered critical to maintaining domestic and regional security, and maintaining a conducive environment for promoting economic wellbeing and national development. When the size of the ZNA was reduced from 51 000 to 40 000, it was a step towards achieving that end.

The restructuring is motivated by the need to adopt an appropriate strategy to meet challenges posed by the current security and economic environment. The major facets of the restructuring exercise include, reorganization of force structure,[62] integrating the civilian and military components of Ministry of Defense, and institution of a planning and programming department. On the face of it, there are obvious benefits of such a restructuring exercise. To what extent this is going to enable ZDF to achieve the goal of enhanced capability will, it may be argued, depend its capacity to develop programs that are both feasible and cost effective.

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[61] The President and ZDF commander-in-chief, Robert G Mugabe has often made remarks to this effect; see for example his addresses to the Third and Fourth sessions of the Fourth Parliament on 1 July 1996 and 1 July 1997 respectively as reported by the official report, *Hansard.*

2. The Economy and Resource Constraints

The NDP states that "due to current economic constraints, there is need to divert financial resources (from defense to other sectors of the economy) in order to meet basic socio-economic needs of the people". While Government acknowledges this need, it also recognizes that "it will not be possible to cut the defence budget in the short-term".

There is no doubt that ZDF needs to modernize equipment so as to execute its national and international roles more effectively. While ZDF views the prevailing peace as an opportunity to improve defense capability that would otherwise be compromised by cutting the defense budget, proponents of the "peace dividend" on the other hand, view it as an opportunity to redirect resources from defense to other sectors. Given these competing needs, measures to justify the efficacy of national investment in defense have to be put in place.

The NDP identifies "three categories of defense spending" essential to enhancing capability, namely: equipment procurement, operation and maintenance costs, and personnel. Equipment procurement costs call for significant investment in new high-technology equipment, and other equipment replacement and upgrading programs. In order to maximize return from such investment, appropriate maintenance programs would have to be implemented, while personnel should be suitably trained and motivated to carry out their roles.

The NDP recognizes the contribution "efficient and effective resource management" makes to attaining "a strong national defense capacity". It therefore undertakes to continually review "organizational structures, systems and procedures", and creation of the "Programming and Planning Department" is given as an example.

3. General Structure of the ZDF Budget

The structure of an organization's budget communicates its priorities, unless appropriations are made arbitrarily. In Government, this applies at national, Ministry, Department, and other lower levels with delegated responsibility for determining resource requirements for government programs. This section provides some observations about the structure of the ZDF budget, in particular its internal structure, and

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[62] Reorganization of force structure also includes reduction of the regular force and introduction of the reserve force.

its relation to selected social welfare programs (Education and Health) and the economy in general.

a. Internal Structure of ZDF Budget Allocations

The bulk of the military component of the ZDF budget goes towards salaries. In the 1997/98 fiscal year, ZNA's allocation for salaries was 82% compared with 18% for other items (i.e. equipment, weaponry, vehicles, uniforms, rations, and all other materiel and services required to sustain the ZDF). The AFZ budget, on the other hand, was allocated 52% for salaries compared with 48% for other items. On average, AFZ's allocations provide more for equipment than for salaries, and this is mainly due to the cost of acquiring aircraft and maintaining them. The ZDF budget as a whole, however, is still skewed in favor of salaries as Table 1 indicates. The average estimates for the period July 1991 through December 2000 provided 76% for salaries and 24% for the rest.

Projected estimates for fiscal years 1999 and 2000 indicate that the proportion of salaries would be reduced to 73.3% and 72.5% respectively. This signals the intention to provide more (at least in relative terms) funds to other programs, and could be achieved either by increasing the level of funding for defense generally or by further reduction in the size of the force, or both. While the budget is increasing in nominal terms, there is a real decline in defense allocations.[63] This decline, coupled with the decline in the value of Zimbabwe's currency (dollar), will make it increasingly difficult to secure adequate funds for the modernization program. There is need to revise the structure of ZDF's budget and this will entail, among other strategies, striking a balance between the mission and force structure.

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[63] According to the Stockholm International Peace Research Institute Year-Book for 1997, Zimbabwe's military expenditure in 1987 was US$ 381 million, compared with US$ 238 in 1995. The figures are based on 1990 constant prices)

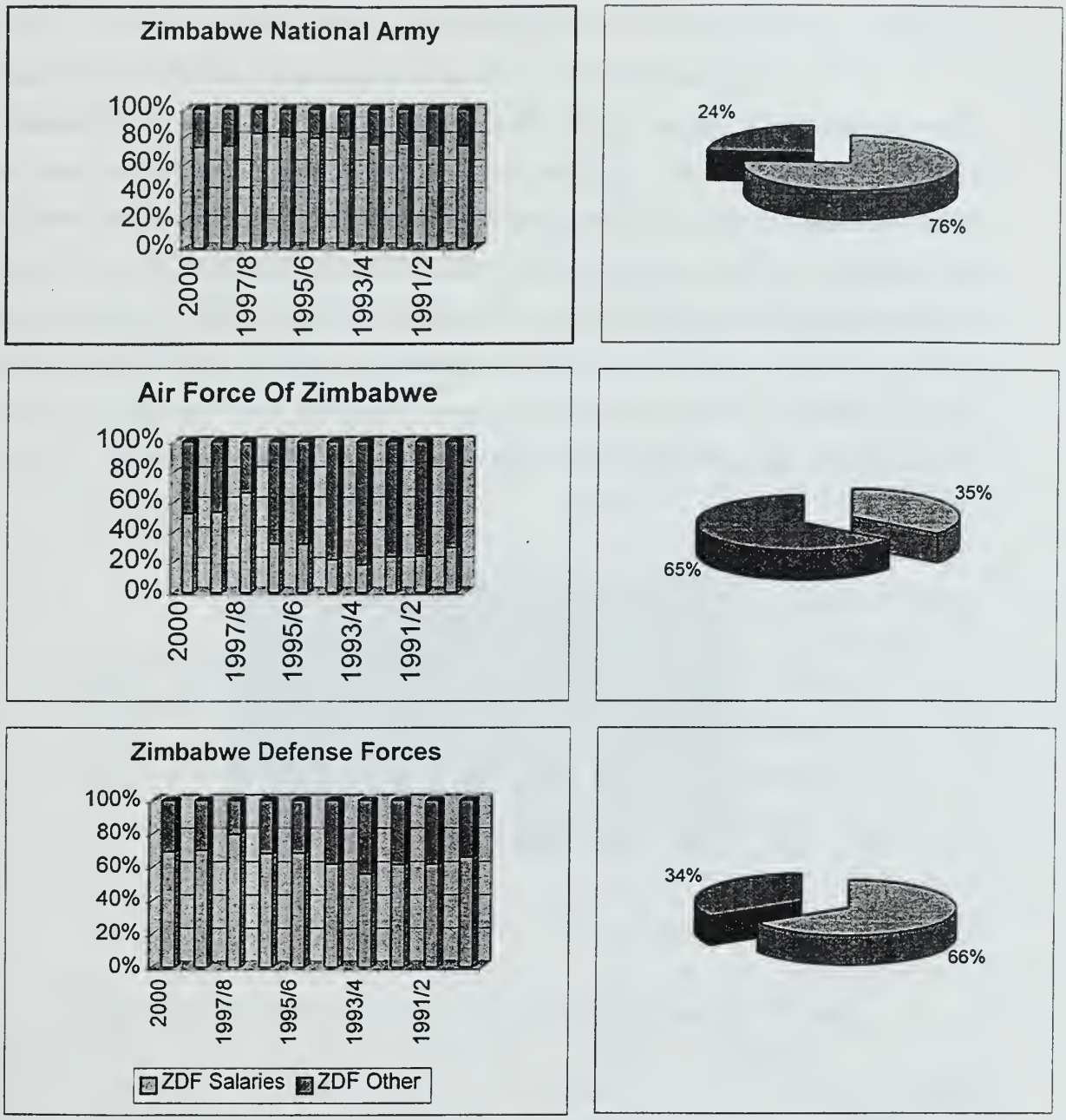

Figure 1. Distribution of ZDF Budget Between Salaries and Other Expenditure Items.

b. ZDF Allocations in Relation to Other Government Allocations

When concern is expressed about high levels of defense expenditure, it is often stated in relation to basic social welfare programs, in particular the education and health. The relative budget allocations for education, health, and defense are shown at

Figure 2. For the 1997/98 fiscal year, the level of allocations relative to the total for vote appropriations were: education, 30%; health, 8%; and defense, 12%.

In Zimbabwe there has been a call to reduce the level of defense spending below that of health spending. By allocating a higher proportion of the budget to defense, it is perceived in some quarters that Government assigns a higher priority to defense than health, regardless of the people's suffering due to inadequate health facilities and medicines. Defense planners need to take such public policy issues into account when crafting their budgetary process. For example, part of the defense budget includes provision of health services to serving and retired members and their families, yet the current budget structure only reflects medicines and medical equipment, and not doctors and other staff's salaries, motor vehicles and maintenance, overheads etc.

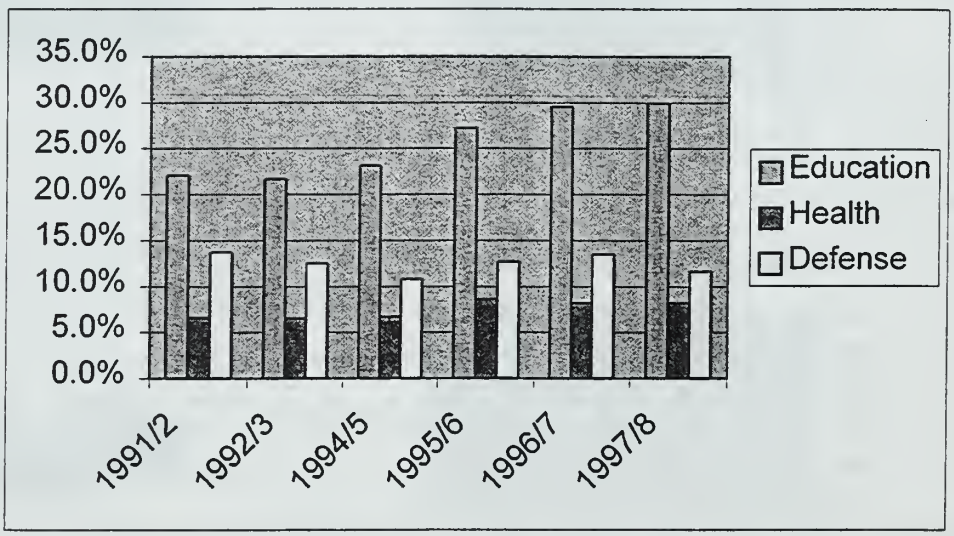

Figure 2. Comparison of Defense Budget With Education and Health Budgets.

Reducing the defense budget when the current level of expenditure is unable to sustain the ZDF in barracks would make efforts to modernize the ZDF impossible, at least at its current strength. Alternative sources of funding would need to be found both from within and outside the MOD.

c. ZDF Expenditure in Relation to the Economy in General

Table 1 indicates that military expenditure as a percentage of GNP has been steadily declining since 1986. It was 6.4% in 1986 compared to 4% in 1995. The defense burden (annual military expenditure per capita) has also been declining; it was US$34 in 1986 compared to US$21 in 1995.

The above indicators do not reflect the negative picture that critics of defense expenditure in Zimbabwe like to paint. However, the indicators are not sufficient to arrive at a definitive conclusion about the impact of defense spending on the Zimbabwean economy. Comprehensive econometric testing of several economic variables would need to be conducted, and even then, different assumptions could lead to different conclusions. The value of conducting such an exercise cannot be over emphasized. It is however beyond the scope of this thesis, and suffices to observe that whatever the conclusions on the impact of ZDF expenditures, modernization cannot be achieved at a lower level of resource endowment.

Table 1. Military Expenditure in Relation to GNP and Population.

Year	GNP Per Capita (Constant 1995 US$m)	Military Expenditure to GNP (%)	Military Expenditure Per Capita (Constant 1995 US$)
1986	542	6.4	34
1987	520	7.5	39
1988	546	6.3	35
1989	563	6.1	35
1990	559	5.3	30
1991	556	5.6	31
1992	511	5.5	28
1993	526	4.3	23
1994	528	3.9	20
1995	516	4.0	21

Source: "World Military Expenditure 1996", US Arms Control and Disarmament Agency Report, July, 1997.

B. GOVERNMENT BUDGETING AS A REGULATORY FRAMEWORK

1. Major Responsibilities of the Ministry of Finance and the National Economic Planning Commission

The major institutions responsible for managing the government budget are the Ministry of Finance (Treasury) and the National Economic Planning Commission (NEPC). The latter is a ministerial level department falling under the executive.

The Fiscal and Economics Department in the Ministry of Finance (MOF) sets off the budgetary process by conducting a macro economic appraisal and preparing "internal" guidelines *(Budget Framework Paper)* for formulation of the budget at MOF/NEPC level. This provides a basis for determining the appropriate fiscal policy targets to be met, and determination of the global estimate of government revenue and expenditure for the period under review.

The *Budget Framework Paper* also provides the basis for deciding how funds will be allocated between capital and recurrent expenditure. In formulating the budget, estimates proposed by various ministries/departments are taken into account. After setting aside funds for constitutional and statutory provisions (e.g. salaries and pensions), Treasury drafts proposed allocations for recurrent expenditure, and NEPC drafts proposed allocations for capital expenditure, otherwise known as the Public Sector Investment Program (PSIP).[64] The two are then consolidated into a "white paper" that forms the basis of the Minister of Finance's budget presentation to Parliament.

2. Constitutional and Statutory Obligations for Managing Public Finances

The Constitution of the Republic of Zimbabwe (referred to as "the constitution" for the remainder of this thesis) makes specific provisions for the management of government finances. (Sections 101 to 106) Section 101 of the Constitution requires all government revenues from whatever source to be paid into the Consolidated Revenue Fund (CRF), except where an Act of Parliament authorizes payment into some other fund established for a specific purpose, or where such Act authorizes retention by the receiving authority for the purpose of defraying its expenses. The constitution also vests in

[64] PSIP involves expenditure on construction and other infrastructure, but does not include other items of a capital nature from a "capital budgeting point of view", e.g. equipment.

Parliament, the authority to appropriate such funds from the CRF, although certain expenditure is expressly authorized by the constitution. The primary input that prompts Parliament to exercise its constitutional authority determine revenues and expenditures for the year originates from the Minister of Finance.

Section 103 (1) imposes a responsibility on the Minister of Finance to lay before Parliament, the estimates of revenue and expenditure of Zimbabwe for each year. Parliament then sits to deliberate on the Minister's budget proposals. Two separate bills, the Finance and Appropriation Bills, are introduced to deal with revenue and expenditure estimates respectively. When passed by Parliament and signed by the president, they become the Finance Act and Appropriation Act. There is also provision for a Supplementary Appropriation Act to cater for cases where the amount appropriated by the Appropriation Act is found to be insufficient, or where new urgent requirements would have arisen. This of course depends on government's capacity to fund the additional expenditure.

The Finance Act authorizes government departments to collect revenues through specified levies such as income and excise taxes, custom duties, licenses etc. The Minister of Finance is responsible for justifying to Parliament, proposals for sources of revenue and levels of levies to be imposed.

The Appropriation Act on the other hand authorizes government departments to incur expenditures and up to specified amounts for the programs that they would have bidded. Each Minister is responsible for defending estimates for his/her Ministry in Parliament. A major criticism of Zimbabwe's budgetary process up to this stage is that Parliament does not really decide on national priorities as this is left to the bureaucracy. This is evidenced by the fact that the MOF proposals rarely change when presented for debate by Parliament.

Parliament's role goes beyond enactment of the Finance and Appropriation Acts. It is also responsible for ensuring that public finances are managed efficiently. In order to achieve this, the constitution makes provision for the appointment and functions of a Comptroller and Auditor General. (Sections 105 and 106) The Comptroller and Auditor General (CAG) is Parliament's "watch-dog" on how government ministries/departments manage public funds. In addition, specific legislation in the form of the Audit and

Exchequer Act provides for, among other things, the appointment, powers and duties of the CAG and of his staff, and the examination and audit of all public accounts. In addition to carrying out annual examination and audit of public accounts, Section 7 (b) provides that the CAG "*may* carry out examinations into the economy, efficiency and effectiveness with which any Ministry, statutory body, statutory fund or other body whose accounts he is required to audit has used its resources in discharging its functions". This expresses government's desire to realize value for money in its operations, hence the mandate for value for money (VFM) audits.

The Audit and Exchequer Act (Section 19) also provides for the appointment of internal auditors to assist Treasury in the management and control of public monies and property. In contrast with the CAG, internal auditors are internal management tools within each Ministry or department as the case may be, and has dual responsibility to the accounting officer of the Ministry concerned, and to Treasury.[65] Unlike CAG, internal auditors have no specific mandate to conduct VFM audits, although this may be included under "any other function that may be assigned to (them) by the Accounting Officer of the Ministry or Department concerned".

3. Government Budgetary Reforms

This thesis has already alluded to the economic pressures that Zimbabwe is facing, and how this has brought pressure to bear on the government to improve its management of public resources. Agencies such as the CAG have continually highlighted those areas where government needs to improve. Although government response has been slow, some significant reforms have recently been instituted. Of particular relevance to this thesis is the introduction of the three-year rolling budget system and expenditure management reforms.

Introduction of the three- year rolling budget system was expected to achieve the following:[66]

- To enable ministries to identify their priorities which can be carried out within the constraints of available resources.

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[65] Accounting officers are normally the "permanent secretaries" of respective ministries or heads of some quasi-autonomous departments.

[66] Budget Statement presented to Parliament by the Minister of Finance on July 25, 1996.

- To make it easier for ministries to focus on medium term goals and outputs of particular programs in relation to resources that they use.
- To enable accounting officers to ensure that important programs are funded adequately.
- To encourage innovative thinking in the management of public funds.

It sought to give more responsibility and flexibility to accounting officers and thus give them an opportunity to manage and control resources in their charge more efficiently and effectively.

The major features of government's recent expenditure management reforms are introduction of expenditure targets and the "stop-payment" system. Their introduction was motivated by the need to improve cash management and to stop some government ministries/departments from continuing to incur over-expenditure.[67]

Expenditure targets involve prorating expenditure on a monthly basis. This would result in more stable cash-flow projections to help treasury manage cash resources better. It would also enforce "spending discipline" within ministries/departments for the benefit of their own programs.

The stop payment system would ensure that checks were paid to creditors only to the extent that funds for the relevant line items were available, and within the set monthly targets. The system would therefore put a stop to over-expenditure. As this system was applied, it became apparent that some ministries /departments continued to commit government funds by placing orders and delaying the processing of documents for payment until funds were "available"; needless to say that this inconvenienced suppliers and introduced a new dimension of inefficiencies.

Government has progressively implemented other reforms such as, performance management and computerization of systems, and it is now looking at implementing performance budgeting. For the ZDF, these positive reforms should impact positively on its ability to better manage scarce resources. There are however some constraining factors of the government budgetary process. These include centralization and

[67] For the purpose of government accounting, over-expenditure (or spending in excess of the amount appropriated by Parliament for a particular item) is considered as "unauthorized expenditure". This thesis uses the expression "over-expenditure" to distinguish it from the case where government finances have been applied to programs other than government programs.

inflexibility of the system in such areas as financial management and procurement. The impact of these and other constraining factors will become apparent when the ZDF budgetary process is specifically addressed in the next two chapters. For the moment it suffices to observe that such constraints stifle initiative to the extent that instead of government departments proposing better ways of managing finances, they simply look to MOF to provide "solutions".

The ZDF budgetary system operates within this general framework of government budgeting. Its budgetary policy framework therefore mirrors the government framework in many respects.

C. ZDF BUDGETING POLICY FRAMEWORK

1. Policy Analysis and Evaluation

ZDF operates in a socio-economic environment that imposes a lot of constraints on decision making. Important decisions have to be made on such issues as force structure, procurement programs, maintenance and other logistic programs, training and development, and human resource management, and it is increasingly getting difficult to justify policy choices based on an "intuitive" decision making process.

ZDF does not use policy analysis tools such as operations research, cost-benefit analysis, cost-effectiveness analysis etc. as decision-making tools to select optimal strategies for meeting its objectives. The absence of such rational analysis entails reliance on intuitive decisions whether taken individually or on the basis of collective effort through boards of inquiry, committees, meetings or other groups created for such purposes. ZDF' current decision-making model manifests itself in its inability to sustain selected projects, ineffectiveness in justifying defense projects to stakeholders, and more generally, confusion at all staff levels on which direction the organization is going.

Assuming that ZDF was committed to implementing the rational policy analyses model immediately, questions that quickly come to mind in terms of capacity to implement it effectively are: Does ZDF have the human resource base capable of conducting such analyses? Is data suitably organized for that purpose readily available? Does ZDF have appropriate information technology resources to support such an

undertaking? Does leadership commitment go beyond rhetoric endorsement to "championing" the model?

This thesis would argue that answers to these questions tend toward the negative, as further discussion on the current budgetary process would testify. Such a model would operate best in an environment where clear objectives guide staff action. Some perspectives on objective setting in ZDF are discussed below.

2. Setting of Objectives

The NDP provides a framework for setting objectives in the ZDF. NDP objectives are generally too broad to base specific projects on. For ZDF to succeed in fulfilling its mandate under the constitution, it is necessary therefore, ZDF leadership to communicate unequivocal objectives supported by resources to make them achievable. Likewise subordinate commanders at all levels should communicate clear performance related objectives capable of objective evaluation.

Commander Zimbabwe Defense Forces (CDF) therefore sets objectives to be achieved by the ZDF each year. The objectives normally cover a period of one year, and are directed to the individual service commanders and chiefs-of-staff in ZDF HQ. The service commanders in turn set their objectives in like manner and disseminate them to subordinate commanders. Major flaws in the current objective setting process are as follows:

- Objectives are not linked to the budgetary process and hence the resources to accomplish them. The tendency for objectives that are not matched with resources is to set them too high to the extent that they become "wish lists". It is difficult if not impossible to evaluate whether the organization is in fact making progress or not. If anything negative signals are likely to be sent leading to frustration and at worst a degenerating work ethic.
- There are no program objectives linked to specific budgets. For example, a "company commanders training program" could have among its objectives, training a certain number of officers in a given period and achieving specified and measurable performance standards, and the program would have a specific budget (i.e. resources sufficient to achieve the objectives). ZDF has

not yet introduced program based budgeting, and it may be argued that this is a serious impediment to efficient resource management.

- Objectives are derived from a top-down approach with very little input from below. The problem with this approach is that it ignores real and fundamental concerns that impede progress, and it has the effect of wishing away problems inherent in the system. Lack of ownership of problems by lower levels of command is a consequence of this approach, and it leads to an attitude that looks up to "the commanders" for solutions at the expense of innovative thinking. Effective planning that leads to results cannot therefore be achieved.

In addition to the annual statements of objectives discussed above, service commanders issue other directives either on a regular or ad hoc basis, specifying what units need to do to achieve certain ends. This also communicates new or modified objectives on a continual basis.

Feedback on achievement or otherwise of these objectives is normally in the form of annual reports, although interim reports may be made in some cases. Commanders at various levels are also required to conduct inspections to assess progress in meeting objectives.

Objectives are critical to any budgetary process or system. The evolution of budgeting systems introduced focus on, among other things, objectives, performance, and program analysis and evaluation, multi-year planning. Effective contemporary budgeting systems have such features.

3. The ZDF "Budgeting System"

Budgeting systems have, over the years, lost specific identity as organizations crafted budgetary processes from all available concepts to suit their specific requirements. The ZDF system also, cannot be specifically identified as incremental budgeting, ZBB or any other. Characteristics of incremental budgeting and ZBB, particularly the former, tend to be predominant in the ZDF budgetary process. The following observations may account for this tendency:

- Incremental budgeting is simple to operate. It demands far less resources than other systems in terms of skilled human resources (e.g. policy analysts), information technology, data etc..

- The absence of establishment tables make the exercise of determining "short falls" more an exercise of making best guesses, and the gap between effective requirements and what the budget can afford is too wide to render any elaborate exercise to determine "zero base requirements" not worth its while.
- The government system which ZDF is "required" to follow stifles innovation and provides an "easy way out"

It would be in ZDF's interest to cease the challenge for "innovative thinking in the management of public funds" referred to in the Minister of Finance's budget statement to Parliament on July 25,1996.

4. Multi-Year Planning and Programming and the Three-Year Rolling Budget System

ZDF adopted the three-year rolling budget system in 1997 by virtue of it operating within the general government-wide budgetary framework. Prior to this development, multi-year financial planning had often been muted without firm commitment to its implementation. Under this system, Government provides indicative figures for financial resources likely to be made available in the future, and this provides an opportunity for the ZDF to develop its program alternatives from which policy analysis tools can be used to determine optimal choices. Until ZDF embraces program budgeting and rational analysis based on quantitative techniques, this would continue to represent lost opportunity.

When this system was introduced, ZDF was ill-prepared to take advantage of it. Firstly, the time between promulgation of the new system by MOF and the implementation date was too short. Time to develop optimal programs was therefore not available. While it is tempting to conclude that this problem was supposed to affect the initial year, it should be noted that commitment to some ill-conceived programs in the first year spanned across the planning/budget period. For the same reason, it would be prudent therefore to review subsequent years' estimates to make appropriate adjustments that will result in optimal benefit to the organization.

Secondly, the planning system to determine how much was to be spent and on what program for each of the three years was fragmented and not based on standard policy guidelines. No guidelines, or objectives to be achieved in the next three years

preceded introduction of the system. This resulted in fragmented planning, and the time factor discussed above made achievement of credible plans or programs impractical.

The above indicates that conception of positive reforms alone is unlikely to yield desired outcomes. A strategy for managing the change would have led to a more successful implementation phase.

5. Line-Item Basis for Managing the Budget

The ZDF budgetary process is currently based on line-item rather than program or mission budgeting. The budget for vehicle spares in the ZDF, for example, is centralized and all units draw their spares from a central ordnance depot. No track of the value of spares issued to the various units, or for specific purposes is kept.[68] Some of the problems emanating from this approach have been alluded to above. It suffices here to emphasize the difficulty in evaluating performance relative to resource inputs for specific programs.

Steps have been taken to introduce program budgeting. These include the establishment of the Programs Department, the Programming and Planning Council chaired by the Secretary for Defense, and the Programming and Planning Staff Committee chaired by the Deputy Secretary for Finance and Administration. Despite these institutional arrangements, program budgeting is not yet in force.

D. BUDGET FORMULATION

From a ZDF perspective, budget formulation involves is the process of compiling and submitting estimates of revenue and expenditure. More emphasis though is placed on expenditure than on revenue and unit level, revenue estimates are rarely required.

1. Initiating the Annual Budget Cycle

Treasury initiates the cycle by calling for all ministries/departments to prepare and submit estimates of revenue and expenditure. MOD disseminates the same information to ZNA and AFZ and this information filters down to unit level. Despite this being an annual requirement due for submission on approximately the same date, most units only start preparing their estimates when they receive the instruction calling for estimates. Budgeting is viewed as a once off annual exercise and not as a continuous

[68] In some exceptional circumstances, such as for UN missions, specific budgets are not made but track is kept of spares (and other resources) used for the purpose of claiming reimbursement.

process. The problems associated with this approach are: arbitrariness in determining the estimates, inadequate time to consider the justification of the estimates, and delay in finalizing the estimates.

Typically the instruction from Treasury includes such issues as deadlines for submission and formats. When the instruction is disseminated down ZDF's chain of command, very little additional information to guide relevant staff on budget priorities, for example, is included. In the absence of prior guidelines as suggested above, budgeting tends to be fragmented and lacking in complementarity.

Treasury also communicates the indicative global estimate for each Ministry and specifies the tentative estimate for salaries, wages and allowances which cannot to be changed without Treasury authority. MOD, then breaks this appropriate portion of the global estimate down among MOD head office and the two services. The services in turn determine the planning figures for directorates and in some cases, formations and units. While treasury's global estimate might be different from the figure proposed in the previous year's proposal under the three-year rolling budget system, it would not be so far off as to render the latter an ineffective planning mechanism.

2. Preparation of Estimates

The actual preparation of estimates is a bottom-up process. It starts at unit level where shortfalls and other requirements are determined and submitted to the formation headquarters. In addition to preparing its own estimates, the formation headquarters uses the information submitted by units to determine its overall estimates.[69] Adjustments to requirements presented by units are invariably adjusted otherwise costing them as presented would result in a figure that makes a mockery of the constraint imposed by Treasury.

The formation estimates are then submitted to the respective service headquarters where they are similarly collated and adjusted before they are sent to ZDF HQ. ZDF HQ staff and their civilian counterparts in MOD prepare and consolidate suitably adjusted

[69] Units and formations are responsible for providing only some of the estimates. For example, items like weapons, vehicles, bulk purchase vehicle spares etc are provided for by respective directorates in Army HQ. Units instead provide their requirements to appropriate Directorates in Army HQ through their respective formation headquarters.

estimates for the head office, ZNA and AFZ. The Secretary for Defense, in his capacity as MOD's accounting officer, then makes the final submission to Treasury.

3. Revenue Estimates

Generally units/formations are not specifically required to present revenue estimates. At formation level however, they are required to maintain rent registers. Actual revenue estimates are prepared at service HQs. In all other cases such as fines and recoveries from lost state property, there is no such requirement.

There is no motivation therefore, to manage the revenue side of public finances. At the ZDF level, introduction of the Defense Procurement Fund into which revenues from sale of redundant assets may be channeled for procurement of new equipment is a positive exception. All other revenue is channeled to the CRF and whether more or less revenue is collected has no apparent significance to ZDF's level of funding.

Preparation of estimates of expenditure involves negotiation in response to budget constraints and competing requirements among various elements of the organization.

E. NEGOTIATION PROCESS

Unit level involvement in formulating estimates of expenditure is minimal. There is therefore, no significant negotiation that takes place at that level. Even at formation level, their major involvement is in computing shortfalls and assigning them costs rather than budgeting for specific programs (the "line-item" versus "program" approach argument). There is also no significant negotiation that formations can engage in. Negotiation becomes more significant at Army HQ and MOD.

Major players in the budgeting formulation process at Army HQ are the Commander and his chiefs-of-staff, Finance Branch, directorates, and their sponsor branches. It is at this level that decisions on procurement of equipment and weapon systems, and on consolidated requirements from formations are made. The process typically involves the Commander identifying his priority areas and the relevant directorates proposing funds required to meet those priorities. Trade-offs are then made between competing requirements within and among the directorates in order to stay within the indicative estimate received from MOD. Negotiations at this level provide the basis for justifying ZNA estimates at MOD/ZDF HQ.

Negotiations at this level seek to ensure that projects are appropriately justified and that defense objectives can be met within the given constraints. Adjustments may be made to ZNA and AFZ submissions as a result. Before the final estimates are submitted to Treasury, there is extensive consultation between them and the Ministry.

The final stage of the negotiation process occurs when the Appropriation Bill is tabled for discussion in Parliament. The Minister of Defense is involved in this process, as he is required to provide justification for his Ministry's estimates. Any variation in defense estimates in Parliament can be expected to be are reductions rather than increases.

F. APPROPRIATION

1. Legislative Action

The Minister of Finance presents the budget proposals to Parliament in terms of section 103 (1) of the constitution. He does this after consultation with his other cabinet colleagues and the executive in general so as to reconcile the proposals with government socio-economic and political goals.

Each functional cabinet minister is responsible for steering the estimates for his/her Ministry through Parliament. This involves presenting the rationale for the estimates and responding to any queries raised by legislators. Previous debates on the defense budget indicate that legislators are more concerned with the level of spending rather than the programs that MOD intends to fund, and about issues of accountability in the management resources allocated to defense.

The constitution also provides for supplementary appropriations (Section 103 (3)) and condonation of unauthorized expenditure (Section 103 (5)). Like the regular appropriations, the minister of defense has to justify them in Parliament. Due to scarcity of funds, government is often unable to fund all "urgent" missions (e.g. peace keeping missions) that MOD is obligated to undertake. Under such circumstances, Treasury insists on MOD sacrificing other programs to fund such missions.

A major concern frequently raised by ZDF is the under-funding that characterizes defense appropriations. Under-funding is blamed for ZDF's failure to: conduct meaningful re-equipment programs, maintain the resultant over-burdened equipment, and

provide some basic services among a host of other problems. Inefficient resource management exacerbates this problem, and improvement in this respect can alleviate the impact of the under-funding. In the absence of evidence that the under-funding problem will be resolved in the near future, it is logical to argue for more and immediate focus on resolving ZDF's resource management problems, while working on a program to solicit funding for defense programs.

The appropriated finances are managed through a fairly standard administrative framework that applies government-wide. The framework is discussed below.

2. Administrative Framework for Managing the Appropriations

For management purposes, the budget is broken down into several categories. Budget in this case refers to the expenditure budget since Parliament does not approve a particular revenue budget for each Ministry. The expenditure budget categories are briefly explained below:

- *Votes.* Each Ministry's budget is referred to as a vote and is designated by a number. The MOD budget, for example, is designated "Vote 4".
- *Sub-votes.* Budgets for major departments within the Ministry are referred to as sub-votes. There are three sub-votes in the Ministry of defense, namely: Head Office, Army and Air Force.
- *Sub-heads.* Within each sub-vote, major expenditure areas are categorized as sub-heads (e.g. Sub-head A is for "Salaries Wages and Allowances").
- *Items and Sub-Items.* These are further categorizations where a number of sub-items make up an item, and a number of items make up a sub-head.

The rationale for such categorization is that it enables each significant part of the budget to be assigned a specific controller. It also facilitates proper accounting and transfer of funds from one area to another, and the level of authority to effect such transfers is based on these categories. The transfer of funds from one account to another is referred to as the virement process. The MOD Accounting Officer, as with his counterparts in other Ministries, can only approve virements between and within items and sub-items under the same sub-head. Virements between sub-heads and sub-votes are referred to Treasury for approval.

G. IMPLEMENTATION

Broadly defined implementation involves the conversion of financial resources into other resources and the management of and accounting for those resources. The scope of implementation as defined here is rather too wide to facilitate discussion of every aspect in this thesis. For this reason selected cases from which major opportunities for improving the budgetary process can be identified are discussed. The cases discussed are: pay and records administration, purchasing cycle, expenditure control, human resource management, and materiel resource management.

1. Case 1: Pay and Records Administration

Salaries constitute the major part (76% on average) of the ZDF budget compared to provision of other goods and services, yet management focuses more attention on improving the institutions and processes for the latter than for the former. This section considers some of the issues pertaining to the ZNA's pay and records system.

The Directorate of Army Pay and Records (DAPAR) is responsible for pay and records administration for all ZNA members. As its main resource, DAPAR relies on Army Data Processing Unit (ADPU) for processing of pay and records input. DAPAR then makes the arrangements for physical payment of members and for accounting for the entire salaries budget. Personnel records administration falls under DAPAR's purview since most changes in members' status (e.g. promotion) also affect their pay. Two major issues are of interest for this thesis and these are DAPAR's organization and staffing, and the role of information technology.

a. Organization and Staffing

Over the years, the organization and staffing of DAPAR has been very dynamic. Major changes were motivated mostly by perceptions that reduction in staff was a natural consequence of computerizing the pay system. It is, however a grave misconception to assume that computerization can be a panacea to administrative or indeed any other problems, and any decisions guided by this belief rather than by careful study of potential benefits and pitfalls of technology often lead to dysfunctional outcomes.

For DAPAR, the issues summed up below were a manifestation of lack of a discernible strategy to benefit from information technology. The personnel

establishment was reduced to the extent that the unit could not function effectively. Typically, DAPAR was given a figure beyond which their staff was not to exceed and it was DAPAR's responsibility to develop an organizational structure to fit around that figure. On adopting the reduced organizational structure, trained staff were relegated to the "surplus list" and so they opted for transfer to other units. A serious constraint was also placed on DAPAR's capacity to deliver quality service that was expected of them. Following representations on the extent of the problem, Army HQ authorized attachment of staff from other units. The attached staff lacked training and experience and tended to slow-down the execution of duties by the regular component.

The pressure to reduce staff emanated from the desire to use posts that could be saved from non-operational units in operational units, and DAPAR was a target due to the "staff-saving" nature of technology in its employ. ZNA could have looked at other options to save such posts such as using a civilian-run computer bureau, or "civilianizing" a majority of DAPAR posts.[70] There obviously are pros and cons for each of these options, and a rational analysis to assess cost effectiveness of alternative options could have been used to aid the decision-making process.

b. Role of Information Technology

Processing pay and records is but one of ADPU's several tasks. Other tasks include management information systems for vehicles, fuels, drugs, medical equipment etc.. All these systems are processed centrally on ADPU's mainframe computer system. Where terminals have been installed at remote sites, they are mostly used for data input and word-processing. The record for the ZNA's ability to exploit information technology is not impressive. ADPU's mainframe based system has never been used to full capacity since its introduction into the organization in the mid-1980s, yet the system is already being considered as obsolete. Its usage has also been fraught with inefficiencies. For the pay and records administration in particular, the discussion

[70] AFZ, for example, uses a Government bureau (Salary Services Bureau) to process its members' salaries. A major criticism of this bureau is its inflexibility to deal with urgent issues, and a long processing cycle. On average, it takes about three months between publication of an occurrence that affects a member's pay and payment to the member. AFZ does not also have control over the organization as there is no contractual arrangement between them. This arrangement could have been different if a civilian firm had been engaged to provide such services.

below provides an instructive example of failure to optimize exploitation of information technology resources.

To execute its responsibilities, DAPAR obtains input from all units scattered around the country and codes that data onto input forms. The input forms are then submitted to ADPU for input and processing. DAPAR, however, has limited capacity for punching input without going through ADPU.

Using a member's change of status from "general duties" to "specialist" an example, such change entitles the member to a higher salary based on professional qualifications and nature of employment. Army HQ authorizes such change and notifies both DAPAR and the unit concerned through "signal". On receipt of the signal, the unit publishes this authority through "Part 2 Orders" which it then sends to DAPAR for adjustment to be made on the member's, pay and records file.[71] DAPAR then transcribes (in coded form) the data from Part 2 Orders onto computer input forms to facilitate punching of details into the computer. Below are examples of some efficiency problems associated with centralized processing and the structure of the system itself that could benefit from "innovative" application of information technology.

- *Quality of Service.* The first problem is associated with transmission of documents to DAPAR. Mailing through postal services sometimes results in documents being lost or delayed in transit. This negates the quality of service given to ZNA members due to delays in making necessary adjustments to their pay.
- *Non-Value Adding Activities.* Data is not captured source but instead it goes through some non-value adding processes (e.g. Unit publication of Part 2 Orders and APAR's compilation of input forms) before it is captured.
- *Redundancy from Lack of Proper Integration of Pay and Personnel Records Systems.* DAPAR's responsibility for records entails updating personnel records and providing Careers Department staff with accurate information for use in their personnel function. Data capture is centralized, and input punched-in for pay purposes does not automatically update the personnel

[71] "Part 2 Orders" is the medium used to promulgate specified personal occurrences that affect a member's pay and personnel record files.

record files. In the example given above, if Careers were to call for the master record file of the individual concerned, it would still indicate him/her as a "general duties" member. Two sets of input forms therefore are completed, one for updating pay and the other for updating the personnel record. Lack of integration of the two systems results in costly duplication of effort, inaccuracy and inconsistency of information, and distorted manpower statistics.

c. Comment on Case

The above case indicates flaws within the decision making process. Focus on operations tended to cloud judgement in deciding the value of supporting services and consequently the latter became a target for "arbitrary" manpower reductions. It can be argued that this is among the major contributors to the resource management crisis that the ZNA has to contend with to this date. Opportunities for "saving" operational posts such as "civilianizing" some posts and outsourcing may need to be explored, and this might need a reassessment of the organization's "over-sensitivity" about security.

While it is generally true that employment of information technology leads to savings in manpower, particularly where routine repetitive tasks are involved, its introduction needs to be based on careful study and a deliberate implementation strategy, other wise the perceived benefits will not be realized. The rapid changes in information technology provide opportunities that ZNA has to cease if it needs to mitigate some of the resource constraints that have become the order of the day. Networks can facilitate capturing input at source, obviate a lot of non-value adding activities, reduce paper-work, and facilitate better communication through such services as electronic mail.

2. Case 2: Purchasing Cycle

Most critics of ZDF management systems view purchasing as the weakest area in the management of resources. This case reviews the major aspects of the purchasing system in particular the following: tender procedures, and requisitioning and payment for goods and services.

a. Tender Procedures

Appendix 2 to Treasury Instructions provides the "Rules for the Procurement of Supplies and Services" (referred to as "the Rules" in the rest of the thesis)

for all government departments.[72] The main feature of the government purchasing system, which seeks "to purchase is stores and to obtain services required with a maximum of economy and efficiency", is its tender system. When designing its internal rules on purchasing, MOD is obliged to ensure that they are consistent with the government tender system. The system requires all goods and services to be procured after inviting competitive bids from potential suppliers. An exception to this rule is where there is only one known supplier, in which case "special purchase" can be made. In all cases, appropriate tender approval is to be sought.

The Government Tender Board (GTB) is responsible for defining the general policy concerning the invitation, evaluation and award of tenders. Not only is GTB a policy setting body, it implements such policy by exercising the same functions. It advertises, evaluates and awards tenders for all ministries and some government enterprises. MOD is exempted from this procedure only in the case of purchase of classified security items such as weapon systems and communications equipment. Centralization of decisions on government contracts seeks to achieve "economy and efficiency" by exploiting economies of scale, ensuring standardization, and providing safeguards for due delivery and dealing with any breaches.

The Rules stipulate different tender authorization levels based on value of goods/services to be purchased. In addition, ministries may set their own limits and operating procedures, provided of course they are consistent with the Rules. Limits may be revised from time to time and the current ones (at exchange rate ZW$17.5 = US$1) are as follows:

- Government Tender Board (GTB) Approval (formal tenders only) - no limit, but some projects require prior Cabinet authorization.
- General Tenders Committee (GTC) Approval - no authorization powers, but recommends award of tenders to the Accounting Officer, who in turn recommends to GTB.
- Informal Tenders Committee (Army HQ level) - US$8, 600.
- Informal Tenders Committee (Formation HQ level) - US$1, 700.

[72] The rules are prescribed by the Zimbabwe Government Tender Board with the approval of the Minister of Finance.

- Directorate of Purchasing (DP) - US$1, 700.

The procedure for obtaining authority to purchase or obtain goods or services can be conveniently summarized as a series of steps. The steps followed for formal tenders are as follows:

- *Step 1*: User department originates specification and submits it to DP.
- *Step 2*: DP prepares recommendations for advertising the tender and submits them to MOD for consideration by GTC.
- *Step 3*: GTC deliberates on the recommendations and makes a decision on whether to proceed as recommended (with or without amendments) or not. GTC makes its recommendations to the accounting officer who in turn makes his recommendation to GTB.
- *Step 4*: GTB goes through the same review process and decides whether to advertise the tender or not.
- *Step 5*: If GTB approves, the tender is advertised for a period of 14 to 27 days. When tenders close, bidders submit their bids to GTB where they are opened in public, stamped, and signed to authenticate the official submission. The tender documents are then passed on to MOD, who in turn pass them to DP for preliminary evaluation.
- *Step 6*: DP evaluates the tender in conjunction with the user-department and submits recommendations to MOD.
- *Step 7*: At MOD, GTC secretariat evaluates the same tender and makes recommendations to GTC. GTC deliberates on the evaluation and submits recommendations to the accounting officer. If he approves, he makes recommendations GTB, otherwise discrepancies have to be cleared with GTC first.
- *Step 8*: At GTB, the secretariat evaluates the tender and makes recommendations for GTB consideration. GTB then makes the final determination and awards the tender in full or in part to one or more bidders depending on the nature of the goods or services to be procured.
- *Step 9*: MOD is notified of GTB's decision and in turn advises the companies concerned and DP.

- *Step 10*: Formal contracts are then drafted and signed, and the user department may then place orders through DP as required.

There are problems associated with these procedures. Among the major ones are: cost of delays inherent in the system and failure to obtain value for money due to emphasis on "cheapest" priced bids.

Cost of Delays. The process to get tender approval is a lengthy one. Centralization at GTB level necessitates a number of intermediate steps or stages. Queries that might be raised on recommendations from the earlier stages result in issues being referred back and forth. The committees involved in the decision making process meet once per week, and any issues not conclusively dealt with at one meeting are therefore deferred to subsequent meetings.

Delays are also occasioned by the laborious nature of the evaluation process. In the first place there are at least three stages where a similar evaluation process on the same tender is carried out (i.e. DP, GTC and GTB). Secondly, the staff that evaluates the tenders rely on a manual system and given the number of items involved in some tenders (e.g. motor vehicle spares), the process becomes unwieldy and exposes government to risk of financial loss through mistakes or unscrupulous manipulation for personal gain.

For running contracts that have to be renewed annually, delays result in some periods where there is no competent authority to purchase goods and services. In the case of fixed delivery contracts, delays of six or more months between the lodging of bids by potential suppliers and the award of tenders by GTB are common. Such delays may, due to intervening circumstances, force the winning potential suppliers to apply for price variation before the contract is even implemented. In such cases original competitors might be asked to confirm whether their tendered prices are still firm, otherwise the tender process would have to be redone.

GTB centralization and duplication of functions lengthen the purchasing cycle and this introduces avoidable costs. Such costs are manifested in a large procurement staff and inefficiency in the management of resources.

Cheapest Price Orientation. In principle, government purchases seek to obtain value for money. In practice, however, there is an apparent orientation towards

awarding tenders on the basis of the lowest priced bid. It may be argued that budgetary pressures and the difficulty of proving transparency when considering such factors as quality contribute to this orientation. The outcome of this problem is that ZNA takes delivery of goods and services of questionable quality at the expense of obtaining value for money.

b. Requisitioning for Goods and Services

Once the relevant tender authorities have been established and contracts signed, user-departments may place orders as required, as long as funds for the purpose are available. It sometimes occurs that the tender is awarded but for one reason or another, funds are not available, and placing orders under such circumstances results in the organization incurring "unauthorized expenditure".

The requisitioning process involves the user department making a formal request for purchase to DP, who then raise the order (requisition) with the contracted supplier. DP action includes checking that the requirement is consistent with the terms of the contract, and checking through the commitment register that funds for the purpose are available. The final stage of this process is delivery. The user department is responsible for certifying that goods/services delivered meet the ZNA specifications.

Some problems are encountered during delivery. These include failure of companies to meet delivery schedules and quality standards. The ZNA's share of these problems emanate from reluctance to specify anticipated delivery schedules when adverting the tender and the lack of capacity to specify and evaluate quality standards. Reluctance to specify delivery schedules is a consequence of ZNA's financial management system that cannot guarantee that commitments made in advance will be funded.

c. Payment for Goods and Services

Most suppliers invoice their goods/services immediately after delivery. The unit receiving the goods/services then checks and certifies that delivery is good in terms of quantity, quality, price billed and any other terms stipulated in the relevant contracts. The unit then processes payment documents (original requisition, supplier invoices, delivery notes etc.) to DP for further checking and control purposes. After checking by DP, the documents are sent to Finance Branch where largely the same

procedures are followed. Finance Branch sends the documents to MOD Finance Section again for checking and control purposes. Finally, documents are then sent to Central Payments Office (CPO) for payment to be made to the supplier.

The payment system involves several intermediate stages. Also worthy of note is the fact that payments for goods and services delivered to all ministries are made through one centralized government agency, CPO. This process inevitably results in a high incidence of late payments. On occasions, suppliers withhold further delivery of supplies or services pending and payment much to the detriment of prospective users. The process also leads to poor buyer/supplier relationships, and ZNA cannot obviously benefit from such relationship. The volume of transactions coupled with multiple handling also creates opportunity for fraud and corrupt practices.

3. Case 3: Expenditure Control

Government instituted expenditure control reforms in an effort to ensure that ministries did not incur unauthorized expenditure. The major expenditure control tool was the commitment register. Due to limited effectiveness in using commitment registers as a control tool, government introduced a "stop-payment system" but this too, had its problems. These two significant control measures are discussed below.

a. Commitment Registers

The purpose of the commitment register is to keep track of the balance on specific budget items by recording the initial allocation and then adjusting for any financial commitments made (i.e. orders placed with suppliers). In some cases the balance is adjusted due to virements that may be authorized from time to time. No commitment of funds may be made if the balance on the item is insufficient to meet new requirements. It is more like maintaining a personal check account where one cannot write checks if he/she does not have enough money in the account. The commitment registers are maintained at the following levels: vote-controller, DP, Finance Branch and MOD Accounts.

In effect, commitment is made at purchasing level, and other levels (except vote-controllers) maintain committed registers. Vote-controllers' commitment registers act as memorandum records of requests made to DP for orders to be placed, and to duplicate the commitments made by DP. Finance Branch and MOD Accounts Office

maintain committed registers that are based on values of goods or services already supplied and invoiced.

Despite the existence of commitment registers, budget items are sometimes over-spent. This may be due to supplier bills exceeding amounts committed (e.g. where commitments are based on estimates as with vehicle repair), under-funding resulting in "lack of options to deal with inescapable expenditure", or simply flagrant violation. This situation led to government introducing further controls such as the stop payment system.

b. "Stop-Payment" System

Government introduced the stop-payment system after it had become apparent that despite impressing on the ministries and departments to use commitment registers effectively, they continued to over-spend. The system also introduced monthly expenditure targets, and payment vouchers in excess of the targets would not be paid.

When it was first introduced, the system was fraught with problems. For example, one problem concerned non-payment of vouchers due to misallocation of transactions. Where a wrong computer code was charged, the balance on that item would in some cases be inadequate to cover genuine requirements and so depriving the suppliers early settlement of their bills. In some cases orders would still be placed and goods/services delivered regardless of the inadequate balance to meet the commitments. The system placed restrictions on payment for such goods or services and it was the suppliers who suffered in the process. Needless to say that this affected the degree of service ZDF subsequently got from its suppliers.

c. Comment on Case

The principle of commitment control is very sound, although the same cannot be said of "committed" control. However, putting in place a control system without enforcing it makes the control ineffective. Maintenance of both commitment and "committed" controls in their current form results in several non-value adding activities, and some inefficiency as well. The cost of controls should always be taken into account when designing systems.

The stop-payment system was introduced because of government's inability to deal with the absence of financial discipline that resulted in over-expenditure.

Unfortunately, the system penalizes suppliers and harms ZDF/supplier relationships. This is a "classic" case of sub-optimization. On the one hand Treasury is credited with "good" financial management because government does not pay out more than what Parliament appropriated and on the other, government departments continue to provide their clients with "good" services. Taken as whole, the system is fraught with inefficiencies that manifest themselves in huge unpaid supplier bills, poor buyer/supplier relations, and inability to realize value for money.

4. Case 4: Human Resources

The proportion of the ZDF budget spent on salaries underscores the need to ensure a good return from investment in human resources. Such benefits can only be realized if cost/benefit and cost effectiveness analyses are an integral feature of ZDF policy and practice. The following provide instructive examples of areas where ZDF policy and practice ignores the value of such analysis: force reduction and redistribution of funds, training and development costs/benefits, and management practices that maximize net benefit from human resources.

a. Force Reduction and Redistribution of Funds

The size of the salaries bill is mainly a function of the numerical strength of the ZDF. ZDF faces is a major problem in that the portion of the budget that is left after payment of salaries (approximately 24%) is inadequate to sustain a force capable of dealing with a major threat to Zimbabwe's security. The proposal to reduce the ZNA from the current 40, 000 to 25, 000 was prompted by realization of this problem. ZDF was engaged in such an exercise before, when the ZNA was reduced from 51,000 to 40, 000; but what benefit did it derive from the exercise? [73]

There was no exercise conducted to quantify the costs and benefits of this exercise, neither has such a study been conducted ahead of the proposals for the second phase. In the absence of such studies, it is difficult to develop policy that maximizes benefits of force reduction. It can be argued that even after the reduction of the ZNA to 40,000, the resource situation deteriorated, and conditions of service even got worse. It appears therefore, that the anticipated redistribution of "savings" realized from manpower

[73] These figures are based on the establishment strength rather than actual figures at the start and end of the exercise.

reduction did not achieve the desired effect. Perhaps the benefits of manpower reduction were subsumed by the escalating cost of goods and services, but in the absence of economic analysis, this can only remain a guess.

Such reduction usually provides funding opportunities from international donors (e.g. European Union) to cater for pensions and training of retrenched soldiers. A case could also be made for such aid to be extended to modernization (e.g. by provision of information technology resources) if this will result in future savings from manpower reductions. After all pressure to reduce the size of the defense force is meant to realize such savings so that they may be channeled to other sectors of the economy.

b. Training and Development Costs/Benefits

The ZDF also invests a lot of funds in its training and development programs. These programs are conducted locally and abroad, and involve both civilian and military courses. ZDF does not, however, keep track of costs of its training programs, and no major post training and development evaluation program has ever been in force. Below are specific examples of issues that ZDF could explore to enhance potential benefit from training and development programs.

- Institution of program/mission budgeting would facilitate evaluation of the costs of alternative training programs relative to objectives to be achieved. For example, a twelve-week training program conducted in one part of the country could achieve the same objectives cheaper than a similar program run over a ten-week period in another, but this would not be apparent in the absence a specific program budget.
- ZDF could aim to maximize benefit through targeted training and development and appropriate employment of staff. Training and development requirements should be based on training inventory that takes into account organizational and individual objectives.
- ZDF could encourage a research ethic among its officer corps. Research could be encouraged on issues that specifically impinge on its capability (e.g. manpower planning, operations research, information technology, logistic science, systems management), and aim to reduce or reverse its "professional lag" behind the civilian sector.

c. Management Practices to Maximize Net Benefit from Human Resources

A motivated workforce is an indispensable asset for any successful organization. In the case of defense forces, the capability for defending national security interests may well depend on the nature of human resource management practices and their ability to motivate the force. Major issues that appear problematic in the ZDF, and are the subject of discussion in this section are career management and conditions of service.

Career Management. ZDF career management includes a number of dysfunctional practices resulting from lack of sound policy, or where sound policy is in place, poor implementation of policy. The following is a sample of problems that invariably lead to disaffection.

- Promotion policy is not consistently applied. For example, the ZNA has a policy for officers to sit and pass promotion examinations, and/or to have attended certain courses as prerequisites for promotion. This policy is applied in some cases and not in others, and for no discernible justification.
- In some cases members do not have equal opportunity in selection for training, promotion, and postings and this may depend on whether you are "in the right place at the right time". For example if a higher appointment becomes vacant, not *all* eligible members may be short-listed for consideration by the relevant board.
- Seniority is not in effect considered as an important factor in considering members for promotion.
- The appraisal system is mainly based on character traits rather than objective performance criteria.
- A policy undertaking to advise members of their next postings in advance (about six months in advance) has remained a wish despite pronouncements to that effect at the highest levels.

Lack of sound policies in some cases and poor implementation of "sound" policies in others may be due to lack of coherent strategy for developing, implementing and evaluating them. Such a strategy could consider among other issues, improving

manpower planning skills, application of information technology systems, and professional management skills. These issues merit unwavering leadership commitment given the importance of human resources in achieving military missions.

Conditions of Service. Conditions of service have a serious effect on force motivation and morale. Unfortunately, ZDF members have witnessed deterioration of their conditions over the years, and in some cases they have to pay for goods and services which government is supposed to provide. For example, free medical benefits for serving and retired members and their families have been seriously eroded to the extent that the "beneficiaries" now rely on private medical facilities for which they have to pay. ZNA internal audit reports frequently highlight instances where money contributed by soldiers for their welfare projects is used to buy such things as stationery, fuel, rations, and for minor repairs of military vehicles due to shortage of government funds for the purpose. Poor accommodation in most units, shortage of transport, and non-payment of duty travel and subsistence allowances are also among the problems faced by ZDF members. The area that receives the most attention is salaries, though it is considered low relative to the cost of living and where applicable, comparable jobs in the private sector.

Resource constraints are forcing a deterioration of conditions of service. In addition, this results in lack of equity in the administration of conditions. For example, members posted to units provided with accommodation are certainly better remunerated than their counterparts in units without, and who are not compensated for forgoing that right. Another example is that while all members are entitled to allowances for duty travel, shortage of funds results in payment being made on the basis of one's rank.

The relevance of human resource management and conditions of service to the budgetary process is that in addition to being part of the implementation process, they have a bearing on the return the organization will get from its investment in human and indeed, other resources. A well-trained, motivated and professional human resource is more likely to manage other resources economically, efficiently and effectively than a poorly trained, less motivated, and less professional one.

5. Case 5: Materiel Resources

Management of materiel resources involves capital and non-capital resources. ZDF has over the years been battling to cope with deteriorating state of its equipment.

Slow rate of replacement meant that the equipment in service deteriorated at a faster rate. When new equipment was bought, quantities involved were too insignificant to make any impact. In fact such equipment would be "overused" to make up for shortfalls, resulting in a very short life of the new equipment. This situation was exacerbated by poor equipment management policies. A few examples are given below.

- Absence of establishment tables showing what equipment and in what quantities each unit is entitled to.
- Absence of a multi-year planning and programming system for equipment procurement.
- Absence of a "cradle to grave" management policy and life cycle costing.
- Emphasis on line-item budgeting and absence of performance criteria to measure efficiency in resource procurement and utilization.
- Failure to conduct economic analyses to determine appropriate levels of service support (e.g. spares, maintenance and fuel) for the equipment.
- Poor management controls resulting in inefficient and ineffective use, and misuse or abuse of resources.

Resources of a non-capital nature also suffer from poor management practices. The large number of inventory items and frequency of transactions makes it difficult to keep track of transactions and produce the management reports necessary for effective decision-making. Audits conducted frequently highlight numerous instances of inventory deficiencies mostly due to poor recording of transactions, pilferage and fraud.

The value of information technology in logistics management continues to elude the ZNA. Computers are currently in limited logistics use at Army HQ, and the bases and units that deal with materials management and transportation rely on manual systems. Improvement in logistics management will be hampered by lack of information technology resources.

Like many other activities, the efficiency of the procurement process has never been evaluated with a view to improving it. Observations about poor procurement practices abound, and this is based on evidence of procurement of wrong items, excessive quantities, poor quality goods, and poor management of contracts in general. The problems go beyond procurement to utilization of resources.

The line item structure of the budget does not allow for evaluation of the efficiency with which units utilize resources. There is also no deliberate policy for performance measurement as a basis for monitoring efficiency in resource utilization. Units are often praised for not exceeding their allocations rather than for efficient resource utilization.

6. Case 6: General Application of Information Technology

Poor management information systems are a major contributor to ZDF's low capacity to manage resources efficiently. ZDF is yet to embrace information technology in a significant way and it lags far behind other organizations, particularly those in the private sector. As discussed in previous sections, efficiency in areas such as general administration (and pay and records administration in particular), human resource management, and logistics could be enhanced through information technology.

The era of relying on centralized mainframe-based processing is quickly getting to be a thing of the past. Personal Computer (PC) based networks with local processing capability have replaced the old era but the ZDF still has catch up with this trend. Global communication trends such as intranet, extranet, internet, and electronic mail are helping organizations cope with research needs and instant exchange of information requirements.

Introduction of latest information technology would no doubt require a large investment of funds. A further complication could be the rate at which technology is changing. Delayed implementation could result in work of earlier stages becoming obsolete before completion of the implementation process. These and other problems call for development of a comprehensive information technology strategy for the investment to be worth its while.

H. REVIEW

Budget reviews are conducted at these five levels: Parliamentary level, Treasury level, MOD level, Army/Air HQ levels, and at unit/formation level. The reviews are a control tool seeking to ensure that public resources are managed effectively and efficiently.

1. Parliamentary Review

The annual and/or any interim or special reports by the CAG form the basis of Parliament's review of budget implementation. A Parliamentary committee (Public Accounts Committee - PAC) is charged with investigating any issues raised by the CAG. While the Minister of Defense is required to defend the budget on presentation to Parliament, the Accounting Officer is more involved in explaining any transgressions in its implementation to the PAC.

The CAG's mandatory annual audits of public accounts are basically "attest" audits, (i.e. they are meant to certify whether the accounts presented by ministries show a true and fair view of how the budget was applied). Very few value-for-money (VFM) audits have been conducted by the department government-wide and in the case of MOD, only one is on record.[74] Section 7 (b) of the Audit and Exchequer Act states that the CAG "*may* carry out examinations into the economy, efficiency and effectiveness with which any Ministry...has used its resources in discharging its functions". These audits are VFM audits, and the wording of the statute gives the CAG discretion to decide if and when they are to be conducted.

2. Treasury Review

Review by treasury mainly involves discussions with Ministry officials on the progress of their respective Appropriation Accounts, and the internal audit function. These are discussed below.

a. Appropriation Account

The Appropriation Account indicates what the Ministry would have spent at the time of review in relation to the expected prorated expenditure, and the projected expenditure to the end of the year in relation to the budget total for the year. Any variations are discussed and decisions are made on such issues as, instituting further controls, applying for virements, or applying for supplementary budget appropriation.

Treasury insists on using expenditure figures according to the CPO print-out (i.e. record of payments made on each item at a given date and balance remaining from the current year's appropriation), while MOD prefers to use figures based on

[74] CAG conducted a VFM audit on the "Provision of (Vehicle) Spares and Equipment to the ZNA Workshops" in 1994-95. The draft report was discussed in July 1995, and the final report was presented in March 1997.

commitments made with suppliers. The CPO print-out does not capture items in transit such as commitments made for goods/services, whether supplied or not, and these may be very significant in influencing management decisions. The lengthy, centralized system for processing payments leads to some of the items in transit remaining unpaid at the end of the current financial year and being carried forward to the following year. These "carry-overs" constitute the first charge to the following year's allocation. Carry-overs impose a serious constraint on the targeted expenditure for the first few months of the new financial year. Review of the Appropriation Account at least provides indicators of potential problems and affords the organization an opportunity to take preventive or corrective action where possible.

b. Internal Audit

Section 18 of the Audit and Exchequer Act empowers Treasury to "manage and control public moneys and state property". Section 19 of the same Act provides for the appointment of an internal auditor "to assist Treasury in carrying out the duties referred to in Section 18". In practice, each Ministry has an internal audit department that has a dual reporting responsibility, first to the Accounting Officer of the Ministry concerned and then to Treasury.

Internal auditors carry out their audits on the basis of annual plans agreed to between them, and the Accounting Officer and Treasury. In some cases though, they are required to carry out investigative audits. They report their observations to the commanders of the ZNA and AFZ as the case may be, the Accounting Officer, Treasury and the CAG. The latter may, and often does, use internal audit report findings to support the annual report to Parliament.

3. Ministry of Defense (MOD) Review

Review at MOD level also involves the appropriation account and internal audit. The Appropriation Account review at this level considers expenditures recorded at four levels (i.e. CPO, MOD, ZNA/AFZ HQ finance departments, and ZNA/AFZ purchasing departments). Each of these levels would reflect different "expenditure" figures. The differences are accounted for by requisitions in transit. The value of requisitions in transit may be an indicator of inefficient processing on the part of some departments, and review enables corrective action to be taken. It is also at MOD level that some virements

are authorized and recommendations for Treasury virements endorsed, and the Appropriation Account review facilitates such decisions.

As indicated under Treasury reviews, MOD has an internal audit department. The department provides the Accounting Officer with reports on how the services are implementing and accounting for the budget. There is also an audit committee at MOD that reviews all CAG and MOD Internal Audit reports and responses thereto. The Audit Committee reviews are made to ensure that audit concerns are effectively dealt with by the respective heads of departments and units/formations audited, and to recommend to the accounting officer measures to improve accounting in MOD.

4. Zimbabwe National Army (ZNA)/Air Force of Zimbabwe (AFZ) Headquarters Review

The appropriation account is also a valuable tool for review at this level. In addition to this, each service has its own internal audit department, and may constitute boards or committees to look into various aspects of budget implementation.

The finance departments carry out the Appropriation Account review in conjunction with vote controllers.[75] Vote-controllers include heads of departments and directorates at Army and Air HQs and some unit/formation commanders. Although some budget items are "decentralized" for implementation purposes, they might be under the control of directorates that are based at Army/Air HQ. Such directorates however, are represented at unit/formation HQs. Unit/formation commanders are normally represented at the Appropriation Account review meetings by the finance officers attached to them.

The internal audit departments for each service have a responsibility to provide the service commanders with appraisals on the state of accounting in the various units. In addition to auditing public funds, ZNA and AFZ internal audit departments have responsibility for auditing non-public funds.[76]

Review may also be made by through boards or committees set up to audit, inquire into, or investigate specific issues raised on implementation of the budget. Boards or committees may be routine (e.g. audit boards required by Accounting Standing Orders) or ad hoc as stated above.

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[75] Vote controllers is the term used for officers with responsibility for managing specific items or sub-items within the budget.

[76] Non-public funds are funds contributed by individual members for welfare and recreation purposes.

5. Formation/Unit Review

The reviews carried at the above levels affect units and formations. In the process of audits, units get invaluable feedback on how they fare in terms of their ability to account for public resources. For many years the standard of accounting in ZDF was very poor as audit reports testify. For this reason auditors were viewed with resentment and could not therefore get the cooperation necessary for "successful" audits.

Appropriation Accounts are also reviewed at this level, but only where budget items are decentralized. Review provides commanders with a useful tool to control their activities and gives them valuable input for any representations on resource problems they may wish to make to higher headquarters. Some major units/ formations have audit sections, and units/formations may constitute boards, verification teams etc. for the purpose of providing evidence on how the budget is being implemented.

I. SURVEY RESULTS

Two surveys were conducted to identify problems or source of problems in the current budgetary process. One was among legislators and the other among key players within ZDF itself. Major observations relating to each survey are discussed below.

1. Legislators' Opinion Survey

The survey questionnaire identified the purpose of the survey as "to identify areas where the (ZDF) budget process can be improved to meet the challenges of modernization in a constrained economy". Three major factors motivated the idea of seeking legislators' opinion on this subject. First, the constitution vests the authority to appropriate public funds to various government programs in the legislators. In principle, it may be assumed that the level of funding for defense relative to other spending programs is, from the legislators' point of view, the optimal level of allocation consistent with ZDF's requirements for safeguarding Zimbabwe's national interests. Second, it is generally acknowledged that the budget is a major instrument in the exercise of civilian authority over the military.

Zimbabwe has provision for 150 legislators. Survey questionnaires were mailed to all registered legislators as at April 1998. Respondents were requested to return the completed questionnaires at least two weeks from the date of receipt but only 20 had

responded after six weeks from the date of receipt. Of these, three returned them uncompleted and were therefore considered as "no opinions".

Except for one question where legislators' opinion was sought on the proportion of GDP that defense spending could be allowed to achieve the modernization goals in the next ten years, questions were "multiple choice" type and required only one selection. In some cases legislators did not indicate their opinion and in a few others, despite an instruction to the contrary, they selected more than one. These were therefore considered as "no opinion" although no specific provision had been made for this particular response.

a. Observations

Most Important Peace-Time Role for the Defense Forces. The majority of respondents (seven) agreed that, "building capacity to counter future threats" was the most important peace-time role of the defense forces. Five "no opinions" were recorded. The other roles: internal security operations, military aid to civil ministries, participation in peace-keeping operations and running self-reliance projects received support from three or less respondents each.

ZDF Modernization as Priority. Eight respondents rated modernization of the ZDF, "compared to other competing national goals" as a "high priority" issue while six rated it as a "priority issue". Three thought it was "not a priority" issue while the other three were recorded as "no opinions".

Proportion of Defense Spending to GDP. Respondents were asked to state their opinion on, "the minimum level of defense expenditure that (they) estimate should be allowed in order to achieve...the goal to modernize ZDF without jeopardizing other national security goals". Six "no opinions" were recorded, and the other opinions ranged from 1% to 60%. Seven were between 1% and 5%, two were 10%, and the other were 20%, 25%, 30%, and 60%.

Source of Major Funding for the Modernization Program. The majority (ten) opinion was that major funding should come from normal government revenue. A close seven thought that it should be funded "from revenues from the state owned defense industries". Three "no opinions" were recorded.

Participation in Defense Policy Formulation. Nine respondents thought that participants in defense policy formulation should be, "the legislature and executive only" while four thought this should be the prerogative of "the executive only". Only three said that participants should be, "all citizens and interest/civic groups", and one said "all citizens in their private capacities" should participate. Three "no opinions" were recorded.

Current Parliamentary Involvement in Defense Matters. Six respondents were happy with their current involvement in defense matters. Nine thought it should be increased while one thought it should be reduced slightly. Three "no opinions" were recorded.

Standard of Accounting in the Defense Forces. Legislators were asked their opinion on the standard of accounting in the defense forces compared to other ministries. Seven thought that it was "inferior"; one thought it was "slightly inferior"; five thought it was "about the same"; two thought that it was "slightly superior"; and one thought it was "superior". Three "no opinions" were recorded.

Major Weakness in the Management of Public Resources. Most respondents (ten) identified "poor procurement practices" as the major weakness in ZDF's management of public resources. Five identified the weakness as "poor management of human resources" while one identified, "poor management of consumable resources". Three no opinions" were recorded.

Improvements from the Three-Year Rolling Budget. Legislators were asked if "introduction of the three-year rolling budget system had helped (them) to improve their management of the national purse". Eight did not see any change; two said there was a slight improvement while two said there was a significant improvement. Three "no opinions" were recorded.

b. Comment

Some pertinent comments can be made from the above feedback. The response to the survey was very poor (i.e. 13.3%). In the absence of a follow-up study, guesses as to the cause could be misleading. Time and distance were major constraining factors in this study and so no follow-up could be made. Though response was poor, certain patterns emerged. However, it would be unreasonable to assume that such

patterns are a reflection of the "general thinking" of Zimbabwe's legislature given the small percentage of the survey returned.

The majority opinion of those returning the survey is that ZDF's most important role in peace-time is to enhance its capacity to defend any future threats to Zimbabwe's national interests. Collectively though, more respondents (thirteen compared with seven) had different views or assigned equal importance to a number of roles. For obvious reasons, the military's view would favor the first argument which is also consistent with the NDP, and the results of this survey indicate different perspectives about the most important roles of the military in peace-time. Without discounting the invariability of divergent views on such issues, it could reasonably be argued that lack of participation of the legislators in formulation of current NDP, and poor "stake-holder education" programs"[77] by ZDF account for the lack of a common position on the issue. This observation is important for ZDF's strategic planning process, particularly with regard to mobilizing resources for its modernization program.

Respondents generally agreed that the ZDF modernization program rates highly among other competing national security goals. There were differences on the sources of funding for such a program and on the level of defense expenditure relative to GDP. The major sources were identified as "normal government revenue", and "revenue from state owned defense industries". Given that normal government revenue is currently "failing" to sustain ZDF, a case for alternative sources of revenue including "revenue from state owned defense industries" appears to be persuasive.

Defense policy can be an important factor in resolving or reconciling different perceptions on defense matters. Most respondents were of the view that defense policy formulation should be the prerogative of "the legislature and executive only". The current NDP (which was prepared without general involvement of the legislators) instead urges wide consultation with the public in general on defense matters. The latter position augurs well for more transparency and reconciling public opinion on the value of defense expenditure in furthering national security and the perception that it is an unnecessary application of resources that could otherwise be applied to other welfare programs.

[77] ZDF has a Public Relations Department that could be responsible for such programs. It is, however, seriously constrained in terms of resources to the extent that it cannot regularly publish internal newsletters and or journals.

Given this argument, it would be logical to present the NDP as a "white paper" to elicit contributions by the general public.

Most respondents also argued for more parliamentary involvement in defense matters. Currently their involvement is mainly in the appropriation of the defense budget and reviewing budget implementation issues reported by CAG. With respect to the latter, the overwhelming view by the respondents is that the standard of accounting in ZDF is inferior to the standards of other ministries. They also identified "poor procurement practices" as the major weakness in ZDF's management of public resources. These observations do not bode well for an organization that is clamoring for more resources to be put at its disposal. ZDF leadership therefore needs to take measures to redress these concerns if the organization is to win affective support for its programs.

The final issue respondents were asked to provide an opinion on was the effectiveness of the "three year rolling budget" system. Most respondents said there had not noticed any change since introduction of the system. It can be argued that it is rather too early for the system to have made a significant impact. The importance of evaluating the system cannot be over emphasized. On its part, the ZDF would benefit from conducting an independent evaluation on the value of the three-year rolling budget system in a defense environment, and making recommendations consistent with reforms suggested in this thesis.

2. ZDF Officers' Survey

The second survey was conducted among ZDF officers appointed as formation commanders, commanding officers and/or vote-controllers. Out of seventy questionnaires that were mailed to respondents, thirty-five responses were received. The purpose of the survey was, "to identify strengths and weaknesses of the ZDF budgetary process with a view to making positive changes". The respondents were selected on the basis that they provided the input for budget formulation and were responsible for implementation of the budget. Their day to day experience with the process places them in a better position to articulate problems encountered especially at the operating level.

Questions asked were related to general policy aspects of the budget, its formulation and negotiation, implementation, and review. Budgeting for revenue was

also of interest given the need to mobilize resources. Major observations from each of these categories are highlighted and comments made below.

a. Observations

General Policy. The major issues canvassed under this heading were the respondents' knowledge of ZDF's strategy to deal with the general shortage of resources, and their understanding of ZDF's vision for the future. This is important because any attempts to redress ZDF's current problems, and the desire to create the defense forces espoused in the NDP cannot be realized without active involvement of the officers in the respondents' capacities.

The respondents were asked whether they were aware of, "ZDF's long-term strategy to deal with the current general shortage of resources". Twenty-two said they were aware while thirteen said they were not. Those who responded in the affirmative were further asked to state the strategy in brief. Most identified "downsizing" as the strategy that ZDF had adopted to deal with the problem. Others offered more of what they thought should be done rather than a deliberate strategy that the organization had adopted. Their suggestions included streamlining procurement procedures, adopting measures to improve accountability and resource management, matching resources to tasks, prioritizing projects, and manpower development.

In response to the question whether they were aware of "ZDF's vision for its modernization program", seventeen said they were, fifteen said they were not, and three said the concept of "vision " was not clear to them. The theme of "a small, well-equipped, well managed, and effective force" was prevalent in the statements of ZDF's vision. In three instances emphasis was on the "creation of two regional commands", while the element of a reserve force to back-up the small regular force was mentioned in only one response.

Budget Formulation and Negotiation. Two major issues merit consideration. First is the setting of objectives for the forthcoming fiscal year. This was meant to identify whether the budgetary process was objective-driven or not, and whether staff had adequate guidance to engage in effective budget formulation or not. Second, the survey sought to identify if respondents were given the opportunity to engage in negotiations that required them to justify their estimates. This would indicate how

effective the budgetary process was in taking into account requirements and concerns of the lower levels of the organization.

Only five respondents said that, "clear and largely attainable" objectives/goals were provided by higher headquarters/authority. The majority (fifteen) agreed that clear objectives/goals were given, but they were "largely unattainable". Three said the objectives were not clear, another ten said "objectives/goals (were) not provided", and two made no comment. In response to another question, twenty-two respondents said that they, "always...set specific objectives /goals to be achieved by (their subordinate units or staff) in the next fiscal year".

Nine respondents confirmed that they were "always" given the opportunity to justify their estimates, four said "often", thirteen said "sometimes", eight said they were not given that opportunity, and one did not comment. All respondents except for the latter confirmed that the estimates they provided were always reduced when presented to higher headquarters/authority.

Budget Implementation. Respondents were asked to identify the, "most well-managed (or least mismanaged) resources" and the, "most mismanaged (or least well-managed) resources" among consumables, physical (non-consumable) assets, and human resources. Management's ability to identify critical problems puts them in a better position to focus attention on the most deserving issues in implementing the budget.

Their ranking of the most well-managed (or least mismanaged) resources was, in descending order, human resources, physical assets, and consumables. Physical assets were ranked as the most mismanaged (or least well-managed) resources, followed by consumables and then human resources.

Review. ZDF has its own internal audit functions, one under ZNA and the other under AFZ. This is in addition to audit services provided by CAG and MOD audit departments. No formal evaluation of the effectiveness of the ZDF audit function was ever carried out.[78] Respondents were asked to rate the latter's effectiveness in relation to that of CAG and MOD auditors. In addition, they were asked to rank the major

[78] Standards for the Practice of Internal Auditing require that internal audit departments be evaluated by independent, qualified persons at least once in every three years so as to provide quality assurance. Formal internal quality assurance reviews should be conducted more frequently.

contributing factors to accounting problems observed by auditors in the course of their reviews.

The majority (thirteen) indicated that they did not have a strong opinion on which of the three audit departments was the most effective. Eight thought MOD internal audit was the most effective, and seven respondents each vouched for CAG and ZDF auditors.

Concerning factors that contributed most to qualified reports by auditors, respondents ranked them as follows in order of most-to-least contribution: employment of unqualified personnel in accounting functions, poor supervision by unit management, poor staffing (manpower strength), and lack of motivation to do the job properly.

Budgeting for Revenue. Respondents were also asked if they were required to submit revenue estimates, and to identify areas with high potential for revenue generation. Only five were required to provide revenue estimates and the other thirty-five were not. Sale of redundant assets was identified as the area with the most potential for revenue generation. Suggestions were also made for other potential revenue generating activities such as; farming, running garrison shops, engaging in money generating sporting activities, leasing facilities (unused capacity) such as workshops, leasing aircraft (charter), conducting air shows and displays, and providing medical services. Participation in peacekeeping operations and "defense industry" were also suggested as major potential revenue generators. ZDF could also "mobilize financial resources" indirectly through cost avoidance, in particular by sticking to its core activities.

Fundamental Changes to Budget Process. The final issue canvassed was the respondents' opinions on, "the single most important thing that needs to be changed in the ZDF budgetary process in order to realize a significant improvement in the management of resources". This question elicited a variety of responses and the "significant" problems highlighted in the process are listed below:

- Poor strategic planning and the absence of clear vision.
- Plans are not linked to resources required for implementation.
- There are no clear objectives for both the short-term and long-term. Notwithstanding lack of clarity, objectives are not linked to the budget.

- There is no clear identification of priorities.
- Lack of consistency in policy implementation.
- The budget is incremental and not based on programs. Specific terms used for "programs" include "activities, tasks, results, and projects".
- The budgetary process does not adapt to changes in the economy.
- Poor consultation with and lack of feedback to the lowest levels of the organization.
- Poor accountability.
- Unavailability of manuals to guide the budget implementation process.
- Lack of management training and poor placement of human resources.

b. Comment

Respondents identified downsizing as the prevalent factor in ZDF's strategy to deal with the resources problem as well as in the articulation of its vision. The high incidence of officers who were "ignorant" of ZDF's strategy (37%) and ZDF's vision (43%), and the differences in the understanding of the "vision" among those who said they were aware of it, are probably indicators ZDF's failure to articulate strategy and vision. From this argument therefore, one of ZDF's major challenges is its ability to engage in a strategic planning process that involves all key stake-holders to engender a common sense of purpose.

There is a danger of entrenching "downsizing" as the panacea to ZDF's problems, both current and in the future as appears to be the trend. This trend inhibits strategic planning thought and creates a sense of hopelessness when the perceived benefits of downsizing cannot be realized. ZNA's previous experience with downsizing is a case in point. In any case, even if the organization engages in downsizing, this would not obviate the need for economic, efficient and effective management of resources, and the current economic environment dictates that innovative strategies be found to achieve that end.

The general lack of consensus on whether the budget formulation is preceded by clear objectives from higher headquarters/authority is testimony to a problem in the objective setting process. Assuming that the statement by the majority of respondents that, "clear goals were given but even though they were largely unattainable"

is the most accurate position, then the goals are reduced "wish lists" that are not matched with resources to accomplish them. Consequently, they are rolled from one year to the next, and intervening changes in priorities tend to blur whatever perception of ZDF's "vision" that they might have.

Respondents believed that the area that needs the most attention in better resource management is management of physical assets (e.g. motor vehicles, aircraft, and equipment). There was a general feeling that human resources were better managed than were physical assets and consumables. It should be stressed that evaluation was based on relativity among the three resource categories. Evidence from the survey does not necessarily mean that either is well-managed or mismanaged in absolute terms. As this thesis has already argued, there are resource management problems across-the-board, and this survey highlights the relative concerns among the areas that need more attention.

The effectiveness ZDF's internal audit resources were generally ranked as equally effective with CAG and MOD auditors. An argument might be made for improving effectiveness of local resources on the basis that they have better knowledge of potential problems in the organization and should therefore be capable of providing more assistance to ZDF management.

The need to improve staff qualifications or to employ qualified people in positions that require accounting skills was highlighted. However, paying attention to accounting only would lead to sub-optimal results. This thesis argues that for the entire budgetary process to improve, qualifications should be improved across the board. Efforts to achieve this "in the past eighteen years" by improving qualifications internally did not achieve the desired results. There is need to evolve a strategy to achieve this goal otherwise the well-intended efforts to modernize would still come to naught.

Inadequate attention has, over the years, been paid to budgeting for revenue. This was probably due to the mistaken belief that it was "government's responsibility" to generate the revenue, and that organizations such as defense were only responsible for implementing spending programs. If one respondent's view that, "we (ZDF) are not a profit making body which should deal with revenue issues" is an indication of attitudes that still prevail among key players in the budgetary process, then a case for urgent staff reorientation is justified. The Government's inability to adequately

fund its programs is in part due to a mismatch between revenue and expenditure, and efficiency by ministries in generating revenue as provided for by law will go a long way to alleviate such problems. The assumption of course is that the much talked about profligacy would not account for any additional revenue generated.

There are no clear performance parameters for revenue collection, and there is lack of feedback and incentives for engaging in such an exercise. At headquarters level, institution of the Defense Procurement Fund into which proceeds from sale of redundant assets would be paid, for example, introduced a major incentive for managing assets to best advantage. A program of incentives (e.g. ploughing back revenue to units) merits ZDF leadership attention in its quest to improve management of resources and mobilize resources for its modernization effort. In addition, other areas suggested by the respondents above deserve attention, but decision on the courses of action should consider the need to avoid detracting ZDF from its primary mission, and should in fact contribute to enhancing capability.

Respondents also identified "critical issues" that need to be addressed in order to improve management of resources in ZDF. The listed issues are discussed in more detail elsewhere in this thesis. It suffices to point out at this stage that the organization has abundant ideas on issues that need resolution, and the challenge is on ZDF leadership is to evolve effective and committed strategies to deal with them.

The results of the survey vindicate the thesis' concern for the need to reengineer the budget process if it is to effectively contribute to modernization of the ZDF. The next chapter will deal with specific issues on the ZDF budgetary process that would benefit from such an approach.

V. REENGINEERING THE ZDF BUDGETARY PROCESS

The challenges facing ZDF are enormous. Funds provided for defense at the current force level are barely adequate, let alone the additional funding required for its modernization program. Its current resource management practices are unlikely to withstand the pressure of such challenges, hence the need to take bold steps to reengineer the budget process. This will not be an easy process given the fact that its system relies heavily on a government budgetary system that is centralized, inflexible, and conservative in its reforms.

This thesis emphases a holistic approach to reforming the budgetary process. The budgetary process goes beyond allocating what is available and spending it. It has to do with mobilization of resources, allocating them efficiently, using them economically, efficiently and effectively, and in the final analysis, being accountable for the results.

Chapters II and III laid the theoretical foundation to put analysis of ZDF's budgetary process (Chapter IV) into proper perspective. This chapter analyses opportunities for improvement that the current system presents, and the prospects for implementing process reengineering to achieve "dramatic improvements". Discussion will be under the following headings:

- Policy and Institutional Improvements.
- Selected Process Improvements.
- Reengineering Approach to Improvements.

A. POLICY AND INSTITUTIONAL IMPROVEMENTS

The objective of the NDP is to ensure that the nation is capable of defending its national interests against foreign and domestic threat. This does not preclude the requirement for defense to compete for scarce national resources on the pretext of the "life and death" character of national survival. Downs and Larkey would argue that seeking to rely on such pretext would be "an exercise of self-delusion".[79]

[79] Downs, George W and Larkey, Patrick D The Search for Government Efficiency (Temple University Press: Philadelphia, 1986) 1st ed 153.

Is modernization necessary and sustainable given the prevailing relative peace and a hostile economic environment? The first part of the question is easy. There is no doubt that military forces with the highest technology rather than numerical strength will dominate the future battlefield. Motivation will not come from the soldiers' preparedness "to die for the country" in the face of the adversary's devastating technology, but from the confidence that the nation has endowed them with the highest possible technology.

The second part is more vexing. A sound economy is required in order to have a strong defense and the converse is also true. The current state of Zimbabwe's economy is far from "sound", and unless innovative ways to mobilize resources are developed, its ability to sustain an extensive modernization program is therefore questionable if not improbable. While the need to modernize may be easy to embrace depending on knowledge of the country's current military capability, is unlikely that the political will to prop up defense spending from its current level can be garnered. This poses an enormous challenge on the ZDF leadership.

ZDF leadership will need to evolve strategies for dealing with this challenge. Mere introspection without taking concrete steps will result in the situation deteriorating to an extent where the ZDF is unable to fulfill its mission. This section of the thesis makes suggestions for dealing with some of the pertinent policy and institution related issues. These will be discussed under the broad headings of: Defense Capability as a Development Agenda, and Strategic Management Approach.

1. Defense Capability as a "Development Agenda"

The first challenge is to put the military on the "development agenda". The argument that government alone cannot afford to fund defense modernization in any significant way without adverse consequences to the economy, and considerable political risk seems quite persuasive. Right now government is pre-occupied with development issues, and despite problems in meeting development targets, its comprehensive development plans bear testimony to this commitment. Defense, however, does not feature in any of these plans. It would be prudent to include defense in development plans on account of the following:

- Defense is the second largest spender of the national budget. For this reason it is a significant factor in the process of allocating national resources.

- Modernization of the defense forces involves huge investment in imported high technology equipment and weapon systems. The drain on foreign currency resources that the modernization program will entail is likely to be unsustainable. Putting defense on the development agenda with particular focus on research and development aimed at developing local industry capacity to produce some of the equipment could result in benefits of "affordable defense" and employment creation among others.[80] Public support for defense programs is likely to be engendered by perceived and tangible benefits to the population.

The first step towards inclusion in the development agenda is to ensure that the NDP goes further than specifying military objectives, and specifies the means to achieve them. This will entail identifying major programs to be undertaken and the required financial commitment. The current NDP falls short in this respect.

The effectiveness of the above approach rests on the premise that the input of all citizens, individual or corporate, would have been taken into account in the defense policy formulation process. The NDP in fact acknowledges the need for public involvement in the defense policy formulation process, although this has never been put into practice.[81] The proposition for a "smart partnership" between the defense sector and private enterprise may be a viable option to mobilize resources for the defense modernization program. Under this scenario, the ZDF should not expect that resources will be mobilized through "donations". Financial resources will instead be mobilized through improvement of ZDF systems so that the cost of supplying defense materiel is minimized, joint conduct of research and development for the long term mutual benefit, and obviating rent seeking in procurement of goods and services through transparency.

Approaching the budgetary process from a strategic perspective creates an environment in which all stakeholders feel the need to contribute to the achievement of the mission to defend national interests. Approach to the whole budgetary process would

[80] The NDP undertakes to support this endeavor.
[81] The NDP acknowledges that ZDF is "a national institution that relies on public support and public funds" and that "consultations will foster accountability and openness in government's dealings related to defense issues".

also benefit from a strategic planning approach, and suggestions for this approach are discussed below.

2. Strategic Management Approach

The NDP provides a broad set of objectives. As already argued the means to achieve these objectives is not specified. This is compounded by the fact that ZDF operates in a dynamic and competitive social, political and economic environment fraught with uncertainties. Such an environment dictates the institution of a strategic planning process.[82] The benefits that would accrue to ZDF may be summed up as follows:

- It will help to identify strategic issues facing ZDF and force its leadership to take specific focused action.
- Properly instituted, the process will engender a culture of strategic thought and action that permeates the entire organization.
- It will enhance communication between higher and lower levels within the hierarchy and provide a rallying point for dealing with organizational problems.
- Improved performance will result as a product of the above benefits.

In the absence of a strategic planning process, ZDF will continue to rely on an assortment of policies that are fragmented and some times contradictory. Bryson aptly captures this dilemma facing many government or public agencies as he observes that:

> Unfortunately, very few governments, public agencies, or non-profit organizations think as long and hard as this about what they want to do and for whom, why, and how. Nor do many condense their thinking into a grand strategy. As a result, there is usually little more than an odd assortment of policies or goals that guide decision making and action in pursuit of organizational purposes. In the absence of deliberate or emergent overall strategic direction, the sum of the organization's parts can be expected to add up to something less than a whole.[83]

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[82] Drawing on Olsen and Eadie, Bryson, John M. Strategic Planning for Public and Non-profit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement, Jossey-Bass Publishers; San Francisco, 1995, defines strategic planning as "a disciplined effort to produce fundamental decisions and actions that shape what an organization is, what it does and why it does it". (4, 5)

[83] Bryson, 135.

The suggestion here is for ZDF to release itself from this trap and embrace the strategic planning process. To "kick-start" this process, a seminar on the topic could be arranged for ZDF's top management in which the benefit of academic wisdom from strategic planning scholars, and the benefit of planning experience from practitioners from different organizations might be exploited. An in-house forum could then be organized to lay the foundation for strategic planning in the ZDF. Embracing the strategic planning process would provide a good foundation for improving other processes within the broad budgetary framework.

B. SELECTED PROCESS IMPROVEMENTS

It should be clear by now that the range of processes constituting the ZDF budgetary process as defined in this thesis are wide and varied. This section identifies some of the processes that arguably merit immediate attention, and serve to illustrate the potential for improvement through process reengineering. Specifically the following will be addressed:

- Budgeting system for the ZDF.
- Resource management.
- Use of information technology.
- Elimination of non-value adding activities.

1. Budgeting System for ZDF

Budget reform has over the years been shifting from a traditional incremental to an objective based systems approach and from a control to a performance focus. The result of this evolution has been hybrid systems that eliminated weaknesses of the past while instituting newer techniques that would hopefully result in improvement in the management of scarce resources. Recurring features in contemporary government budgeting systems are: determination of clear objectives, long range planning, identification of alternative programs and selection based on cost/benefit and cost effectiveness analysis, and using performance as a basis for structuring the budget and measuring performance.

a. The Current System

The ZDF budget process is also a combination of different budget systems, in particular incremental and ZBB systems. There is no published policy on the system in use and the systems can only be inferred from the way budget activities are conducted. It should be noted however, that its version of ZBB differs in significant respects with the ZBB process discussed in Chapter II. For example, there are no objectives that are specifically linked with the budgetary process for each level of responsibility, and programs are not evaluated at different levels of resource allocation and performance.

In general, the ZDF budgetary process is characterized by fragmented and ineffective short-range planning, absence of cost-benefit and cost-effectiveness analyses in the selection of projects to be undertaken, lack of performance evaluation measures, and a general environment that is not conducive to innovation. The system also does not engender enthusiastic participation of lower level key players in the budget formulation and implementation process.

ZDF has recognized the problem of short-range planning which has been a source of major weakness particularly for its procurement programs. Evidence of this recognition is the institution of the Programs Branch at ZDF HQ. The effectiveness of this department however, will depend on a number of factors including ZDF leadership commitment to a strategic planning process and appropriate human resource availability.

General concern for improving ZDF management of resources and institution of the Programs Department may signal the need to move towards PPBS, although the system nomenclature could be different. Whether this is the case or not, the argument has been made that PPBS would be an attractive system to deal with ZDF budgetary problems. It would therefore be instructive to evaluate how the ZDF's current system compares with PPBS. The US Department of Defense PPBS, on which the discussion in this thesis is based, provides a convenient model for the purpose. The evaluation is restricted to the general framework consistent with the scope of this thesis.

b. PPBS Versus Current ZDF System

Details of the PPBS have been discussed in Chapter II. Reference will therefore be made to the outcome of each phase to determine how it relates to the ZDF system.

Defense Planning Guidance (DPG). The planning phase of PPBS involves identification of national interests, examination of world security environment, defining national military strategy, and planning force structure. The phase culminates in the Secretary of Defense issuing a DPG to the services. The DPG provides the services with, among other things, major policy issues, guidance on force planning, and resource planning and fiscal guidance. Programming is then based on such guidance.

In the ZDF process, involvement of the Minister of Defense (equivalent to Secretary of Defense) does not culminate in the issue of a formal planning guidance as the DPG. ZDF relies on policy as it evolves through regular and ad hoc meetings between the civilian and military leadership. There is no coherent planning document (that includes national military strategy and policy to support the strategy) that is available to key players in the budget process. Traditionally, ZDF is a very "security sensitive" organization, and information necessary for effective resource planning and management might thus be classified beyond the security clearance of some of the key players in the budget process.

The programming system that ZDF is in the process of introducing is centralized at MOD (ZDF HQ). This is in contrast with the PPBS system where planning guidance is given at MOD (equivalent) level, and programming is carried out by the respective services. Policy is thus set at the higher level for implementation at the lower level. The size of the ZDF might provide a good argument for centralized programming of major equipment, but this might constrain the service commanders in selecting the combination of programs on which their success will be evaluated. If the latter argument is accepted, then there is merit to consider programming at service level, while MOD would provide general policy and preside over a "programming board" to review and confirm the appropriate programs. Programming at service level will also be inevitable if the program and /or mission budgeting system as discussed in this thesis is embraced.

Program Objective Memorandum (POM). The programming phase involves the preparation of POM by the services. Information from the DPG is translated into program packages, and programs are developed to cover a six-year period. Selection of programs is based on rationally developed analyses that provide justification/evidence of the efficient utilization of public resources. Service programs are then consolidated into JPAM, before submission for program decision by the DPRB, chaired by the Secretary of Defense.

ZDF has no experience in programming and is only starting to embark on such a system. Prior to government's introduction of the three-year rolling budget system, ZDF financial planning was done on an annual basis. Planning problems manifested themselves in procurement projects not being completed and items procured not making a significant improvement in enhancing capability. Implementation of program or mission-based budgeting will assist in improving resource planning and management, but if and only if its introduction is managed properly.

Budget Guidance Manual. Approved programs are then budgeted for. This stage is necessary to relate programs to financial resources available each year, and facilitate adjustment of the future years POM. Offices responsible for submitting budget estimates are guided by the BGM.

The ZDF budget process does not give adequate guidance to vote-controllers. (i.e. there is no equivalent of BGM) consequently submissions of estimates vary to the extent that the magnitude of adjustments made to the estimates make a mockery of the process, at least from the vote-controllers' point of view.

General Observations. PPBS is an objectives-based system that relies on rational analysis in the selection of programs. The process provides guidance to players at each stage, and hearings are conducted to confirm program justification. This forces decision-makers at each level to focus on organizational goals and gives them valuable feedback on which to base future plans.

Civilian authority over the military is further articulated through the PPBS process. Responsibility for civilian control of the military goes beyond mere subordination in terms of taking orders, and is asserted in terms of providing resources for the military.

ZDF could benefit from introducing of PPBS. Introduction of such a far reaching system should be preceded by a strategy that would take into account changing the organizational culture and building capacity to achieve an efficient and effective system. A strategic planning process would also enable ZDF to canvass the question of how best civilian control could benefit ZDF at the resource provision level.

2. Resource Management

It was pointed out earlier that the capability of the defense forces to meet their mission depends to a great extent on their staying power; their ability to sustain a force in combat over a long period of time. Resource planning and management is a key factor in achieving this capability. ZDF resource management is an area with great potential for, in reengineering parlance, "dramatic improvement". The inadequacy of financial resources restricts the level of acquisition of other resources, and this calls for innovative ways to obtain more value from existing resources, and to improve the process of acquiring new resources. The discussion in Chapter IV raised some issues that ZDF needs to pay attention to if it is to realize optimum benefit from its resource management. This section pays particular attention to improvement in human resource management practices and institution of program or mission based budgeting.

a. Human Resource Management Practices

The detailed discussion of human resource management practices points to a failure of the organization to optimize benefits from its most important resource. It is worth reiterating that good human resource management will have positive spin-off effects on the management of resources.

The intention of ZDF's manpower reduction programs is to release more funds for needy areas such as procurement of equipment and other logistic resources. This is in keeping with the intention to achieve "a small, well-trained and equipped professional defense force". Previous manpower reduction plans did not quantify the expected monetory savings, and neither did the post-reduction evaluation. Consequently, the expected savings could not be specifically targeted to a spending program. From an ordinary soldier's point of view the exercise merely cushioned the effects of further budget reduction, because resource availability and conditions of service got poorer. There is no doubt that reduction programs result in significant savings, but if ZDF cannot

identify them in precise terms and specifically target them, it will be unable to maximize benefits as intended.

ZDF manpower statistics in general, are poorly maintained. One area that suffers from this problem is the evaluation of benefits from training and development programs. As the single most important activity for ZDF during peace time, there is need to keep track of training and development costs. The budget should also be structured in a way that identifies allocations to training. In this manner, it will be clear to the public for example, that ZDF is spending money on specified training programs and not simply on its sustenance in barracks. On its part, ZDF would be better able to compare costs with benefits.

The thesis also identified problems in ZDF's human resource practices. Major areas of concern are career management practices and conditions of service. The importance of these to morale cannot be over emphasized. A trend towards "a smaller, less motivated force" appears to be unfolding and this is certainly not in keeping with a modernized professional force, and it compromises readiness as defined in this thesis.

Poor career management practices are a result of a number of factors. Among these are poor policies, poor implementation of good policies, and lack of management commitment. These problems are exacerbated by poor management information systems on which to base decisions. Solutions to these problems lie primarily in management's commitment to change, which ironically has been identified as a problem itself. From a strategic planning process point of view, the human resource problems qualify as strategic issues which can be dealt with as such if ZDF embraces the strategic planning process to seek solutions to its problems.

As for conditions of service, they have continued on a deteriorating trend. It was hoped that by moving towards a smaller ZDF, conditions of service would improve, but as already argued above, ZDF's planning system does not specifically target savings from manpower reduction to specified programs. Benefits to conditions of service, if any, might only therefore be incidental.

b. Program/Mission-Based Budgeting

The line-item based budgeting system does not afford ZDF the opportunity to evaluate cost-benefit or cost-effectiveness in executing its programs

relative to its missions. The absence of performance-based criteria for managing resources is also an impediment to efficiency in ZDF's quest to get the most value out of limited financial resources.

At the equipment procurement level, focus on costs should go beyond "landed costs" to "life-cycle costs". Such costs should be taken into account in the proposed multi-year programming system. The value of this approach is that it would be possible to avoid programs that appear to be cost-effective in the short run, yet the reverse would be true in the long run.

The procurement process itself needs to be reviewed. The system as described includes a lengthy and laborious tender system, and an equally unwieldy ordering and payment system. A reengineering approach to process improvement will help to rid the system of non-value adding activities, while enhancing capacity for the process to achieve value for money.

Measures taken to address the above problems cannot in themselves yield desired results, or at least be properly evaluated if the organization is not clear about what it wants to achieve, and what its priorities are. The absence of equipment establishment tables is a serious flaw in this respect. This problem can be traced back to ZDF's planning problems. The broad objectives of the NDP are not clear about the force structure that ZDF is to adopt. Consequently, the structure is so fluid that planning to support such a structure is problematic. Despite this problem, a decision to work on some provisional structure will enable a reasonable start to resource management.

If ZDF's current (peace-time) resource endowment is a reflection of its war-time logistics capability, then its ability to pass the "staying power test" in a prolonged limited war is in serious jeopardy. While the NDP analysis asserts that no such threat currently exists, this may be the opportune time to prepare for the unexpected. ZDF needs to build-up capability in this respect, and financial constraints dictate that this be a gradual process. ZDF should therefore establish priorities based on some levels of readiness. The following process would then be undertaken:

- State peace and war-time missions clearly and relate how much of existing resources are devoted to each mission.

- Determine levels of readiness based on perceived threat and the capacity to mobilize resources during conflict escalation.
- Determine resources for each level of readiness.
- Determine peace-time resource levels such as minimum, intermediate, and optimal, or whatever nomenclature is preferred.

Care should be taken to balance both peace and war-time requirement levels to enable ZDF to respond to escalation effectively. Such a system would enable ZDF to identify mission-related priorities and establish clear milestones to monitor progress in capability enhancement. Procurement programs would among other considerations be based on priorities set above. This would also provide credible justification for financial resources required, as well as provide evidence to civilian authority of the ZDF's level of readiness to defend Zimbabwe's national interests.

3. Use of Information Technology

ZDF's rudimentary information technology resources are likely to be an impediment to the modernization process. They are rudimentary in the sense that only a small proportion of ZDF's processing requirements is catered for. The mainframe computer system that the ZDF relies on is also on the verge of technological obsolescence. A handful of PCs available to ZDF are mainly found in offices with limited processing requirements, and they are used mainly for word processing. The major focus in utilizing information technology has been on processing the payroll. All other systems have tended to receive little attention despite the "large unutilized capacity" of the mainframe.

The attempt to use the current system for remotely based logistical functions without affording the units concerned any processing (let alone input) capability is both inefficient and ineffective. The organization has also failed to capitalize on the system's potential to process human resources related management information, and this is manifested in the numerous manual returns Careers Department demands from units instead of having the information readily available from its management information system.

ZDF needs to revisit its approach to information technology otherwise its attempt to achieve efficiency will continue to be elusive. It is important to emphasize that

technology alone can never be the panacea to modernization and efficiency problems, but properly implemented, it can make the difference between a successful organization and a failing one.

Introducing information technology or deciding to change the current system is a major strategic decision that basically requires answers to self-directed fundamental questions: "Where are we? Where do we want to go? How do we get there? What are our missions now and in the future?" The argument in this thesis is that ZDF is certainly far from where it should be, and needs to develop a strategy consistent with its modernization vision.

4. Review

The review process is carried out at various stages from the unit to Parliament level. The main problems with the review process are: focus on expenditure rather than economy, efficiency and effectiveness; duplication of functions; and ineffective action on review feedback.

a. Review Focus

Throughout the budgetary process, review activities focus on ensuring that vote controllers do not exceed their allocations rather than on how economically, efficiently, and effectively they utilize resources. Control against over-expenditure is important, but it should go further to ensure that value for money is considered. This, of course, would be difficult if not impossible where performance parameters are not set. There is need for ZDF to address this system deficiency to cope with the dwindling financial resources.

From an audit point of view, only CAG auditors have been engaged in value for money audits. MOD and ZNA/AFZ internal auditors have yet to develop the capacity for such audits. Such audits would be most effective if ZDF adopts a performance focus in managing its resources.

b. Duplication of Functions

Functions are duplicated mainly in the review of commitment control (i.e. Appropriation Account), and in the audit process.

The number of stages where commitment and committed registers are reviewed is related to the number of stages where they are maintained (i.e. at MOD,

ZNA/AFZ finance departments, purchasing departments, and vote-controller levels). There is reason for combining some of the activities to avoid duplication. For example, combining the vote-control functions of the purchasing and finance departments effectively eliminates one stage while enhancing efficiency of the process. A process reengineering approach could help to identify other cases of duplication in the budgetary process.

There are three major audit organizations (CAG External Audit, and MOD and ZNA/AFZ Internal Audit Departments), all of which have a mandate to audit public funds. CAG is Parliament's watchdog and it is from their reports that the public accounts committee bases its hearings on. The internal audit function is duplicated at the MOD and ZNA/AFZ level. At this level, the audits are internal to MOD although ZNA and AFZ departments report to their respective service commanders. The justification for this is that both commanders account for large sums of public funds and therefore need such an internal control mechanism. This argument is indeed plausible, in particular because of the below standard state of accounting in ZDF. Since both concentrate on financial audits, the effect is to duplicate the function, or where duplication is avoided, their effort results in wider audit coverage.

Options that could maximize benefit from audit effort need to be considered. Two examples are given below.

The first option is to have an enlarged audit department at MOD level with a budget of its own to ensure effectiveness. The department could them be mandated to conduct both financial and value for money audits. A management consultancy role could also be assigned to such a department.

The second option is to have MOD internal auditors conduct financial audits while ZNA/ZFZ internal auditors conduct VFM audits, or vice versa. This limitation of scope would, however, be inconsistent with the requirements of International Standards on Internal Auditing to which internal auditors subscribe. MOF might also disagree with attempts to limit the scope of internal auditors as long as they are required to report to them.

The above options are given for illustrative purposes. Arguments for and against the above or any other options can be quite exhaustive, but for the purpose of this

thesis, it suffices to point out that there are options to finding better ways to reconfigure the current audit resources to meet the requirements for a performance oriented ZDF.

c. Action on Review Feedback

Effectiveness of the review process depends on timely action in response to feedback. Two examples, delays in responding to application for virements and failure to impose effective sanctions in response to violations can be cited.

Virements are applied for when after review of the appropriation account, it becomes apparent some items are likely to be overspent while others would be underspent if the expenditure trend remains the same. The virements are authorized at MOD or Treasury depending on value. Processing of virements is a long, bureaucratic procedure, and they are confirmed through credit entries on CPO's monthly print-out. The delays inherent in the process affects planning at lower levels and leads to poor management of resources.

Violations are often exposed through the audit process. Lack of effective sanctions (e.g. disciplinary action, dismissal for incompetence) contributes to the perpetuation of violations. In some cases, officers give little attention to improving controls despite recommendations by auditors. The audit committee at MOD could be given more powers to take such substantive action (e.g. to surcharge violators) instead of merely considering the "effectiveness" of audit responses.

The above analysis of ZDF's budgetary process indicates that inefficiencies pervade the entire process. ZDF could benefit from the reengineering approach to process improvement. Reengineering offers the opportunity to progressively (not incrementally) deal with processes on the basis of established priorities. The final part of this chapter explores a model that indicates how some of the processes could be reengineered.

C. A REENGINEERING APPROACH TO PROCESS IMPROVEMENTS

The model presented here illustrates an approach that could be used by ZDF in improving aspects of its budgetary process. The model is based on a budgetary process for training stationery for the Zimbabwe Staff College. A relatively simple example has

been selected to ensure that principles covered in this thesis are not overshadowed. The processes covered are:

- Allocation Process
- Order-to-Delivery Process
- Receipt-to-Payment Process

Each process is discussed under two main headings; the current and the reengineered process. As discussed in Chapter III, reengineering of one process often affects other processes, which themselves might need reengineering.

1. Allocation Process

a. Current Process

Funds for stationery, like most other items, are allocated on a line-item basis. There is no specific training budget and neither is allocation made on the basis of specific missions or programs. Authority to buy stationery and vote-control are centralized at Army Headquarters, but it has no capacity to effectively monitor the efficiency in stationery usage. At this level therefore, control is restricted to monitoring adherence to expenditure targets and ensuring that at the end of the financial year the allocation is not overspent.

b. Reengineered Process

Allocation is program based. The various courses that are run by ZSC (Combined Command and Staff Course, Junior Staff Course, and other courses periodically run by the college) can be classified as specific programs. Allocations for each of the budget items, stationery being one of them, are classified as program elements. For ZSC therefore, each of the courses will have an allocation for stationery.

Usage is based on predetermined rates derived from specific exercise requirements. The review process exposes inefficiency on the part of exercise drafters where, for example, there is need to reprint of exercises to correct errors, and such errors exceed the tolerance limits. Stationery usage rates would also be used on the part of students, and excess requirements would have to be provided by students from their own resources. ZSC would therefore have effective control focussed not only on the need to avoid overspending, but on the economy, efficiency and effectiveness in managing the stationery resource as well.

2. Order-to-Delivery Process

a. Current Process

All units buy their stationery (whether printed or not) from Government and Printing Stationery Department (GPS). Where GPS is unable to provide the stationery, it gives units authority to buy from the market.[84]

The order to delivery process involves the following steps:

- ZSC sends requirement to DP.
- DP checks commitment register. If funds are available, a purchase order is raised. If funds are not available, unit is advised to seek funds from Finance Branch. If funds are provided (usually through virement action) unit returns to DP who raise the purchase order, otherwise ZSC goes without government purchased stationery.
- The unit takes the purchase order to GPS and collects the stationery if available. If the stationery is not available, the unit obtains authority to buy from other sources and takes it back to DP for processing. DP processing involves tender procedures explained in Chapter III, and it may take from days to weeks before delivery is effected.

b. Reengineered Process

The main features of the reengineered process are the application of technology and elimination of intermediate processing steps. First, ZDF is linked to its major and regular suppliers (including GPS) through a computer network (extranet). Stationery availability at GPS can therefore be verified through the network to avoid potential waste of time as is the case in the current process.

Second, DP's function is limited to selection and evaluation of contract suppliers and dealing with reported cases of poor performance, and not the day to day processing of orders which is left to the unit concerned. The financial control element in DP which is a duplication of what Finance Branch is mandated to do, is eliminated. The latter then maintains electronic commitment registers, through which vote-controllers (linked through intranet) are able to verify balances and make commitments. This also eliminates the need for the unit to go back and forth between the DP and Finance Brach

[84] ADPU is a special case and it is authorized to buy computer stationery.

to seek funds if the DP commitment register indicates an unfavorable position, and when Finance Branch approves additional expenditure. The role of Finance Branch in this case is to facilitate the efficient functioning of the electronic commitment registers, and using management information to manage the budget efficiently.

Limited approved suppliers are contracted in keeping with contemporary purchasing philosophy that has proved to be cost effective in terms of cost savings, quality, and reliability. Related to the DP function of processing tenders and establishment of contracts, the process could be reengineered by: decentralization of GTB functions to MOD, adjusting upwards the tender limits for ZNA and AFZ, establishing only one secretariat to deal with tender evaluations that exceed ZNA/AFZ limits, automating as far as possible the evaluation process through tailor-made software.

ZSC can electronically verify stock availability at GPS, check its uncommitted balance and process its commitment electronically, and proceed to place an order with any of the approved suppliers in terms of the organizational rules on purchasing. The unit is therefore able to purchase its stationery with a minimum of effort without sacrificing quality of goods delivered and cost savings are realized by removing non-value-adding activities.

3. Receipt-to-Payment Process

a. Current Process

There is a long process for effecting payment for goods and services supplied. On average suppliers are paid sixty days from the date of delivery. The process involves the following stages:

- ZSC certifies and submits copy of original order together with delivery note and invoices (payment documents) to DP.
- DP checks payment documents, makes entries in the commitment registers to confirm expenditure and passes documents to Finance Branch.
- Finance Branch goes through an almost similar process, except that the entries in the committed registers are made for the first time and passes the document on to MOD accounts office.
- MOD checks the documents, makes entries in their committed registers and pass to CPO.

- CPO then processes check and sends it to supplier or deposits it in supplier's account.

b. Reengineered Process

The current process involves a number of non-value adding activities that could be eliminated through reengineering. As with the order-to-receipt process, information technology and elimination of non-value adding activities play an important role in the reengineered process.

In the reengineered process, processing of checks would be decentralized to MOD or even lower levels.[85] No committed registers would be maintained at MOD level. Payments would be done on a daily basis instead of fortnightly as in the current process. DP and Finance Branch commitment and committed registers would be combined into one electronic system to the extent that vote-controllers can effectively perform their "control" function. DP and Finance Branch would also not handle the payment documents as these would be directed to the accounts section at MOD or such other lower level authorized to process payments.

4. Comment

The above model indicates the "radicalism" of the reengineering approach to improving processes. The benefits in terms of manpower savings and cutting cycle time are most apparent.

The current system is replete with non-value adding controls whose application is certainly ineffective. The challenge to the ZDF is its ability to replace these controls with more skilled manpower, information technology aids, and an ethical culture. A thorough evaluation of the controls could well prove that they impose a higher cost than the losses they are supposed to prevent.

While information technology cannot on its own improve processes, its "essential enabler" role to the reengineering process is evident. In fact some of the intermediate non-value adding steps would be difficult to eliminate without sacrificing efficiency in the absence of information technology.

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[85] This depends on government's commitment to decentralization and its preparedness to devolve some of its cash management responsibilities. ZDF currently operates Imprest Accounts that deal with disbursement of salaries and travel and subsistence allowances, but payment for all other goods and services is done through CPO.

Leadership commitment is indispensable for success of any reengineering exercise. If ZDF leadership accepts this approach as the way forward, they will have to deal with very far-reaching changes that involve not only changing internal process, but influencing change in some external processes as well. The supreme mission to defend national interests can only be achieved through a capable force, and if radical measures have to be taken to improve resource planning and management, a persuasive argument for mission budgeting, performance management, and process reengineering exists.

VI. CONCLUSION

A. PROBLEM SUMMARY

The economic environment within which the ZDF budgetary process operates has been deteriorating over the years. The Government's expansionary fiscal policies resulting in an unsustainably high budget deficit among other problems, are blamed for the poor economic conditions that militate against economic growth. Consequently, there is a general call for government to reduce its expenditure and improve management of public resources.

The defense budget is the second largest among the Government's expenditure programs. Given the relative peace currently prevailing in the region, it is considered by many as too high to be sustained by Zimbabwe's economy. On the other hand, government has committed itself to modernizing ZDF to enhance its capability to meet any threats to Zimbabwe's national interests. Modernizing ZDF would involve investment in new, technologically advanced equipment and weaponry, and improvement in associated systems in order to realize optimal returns from such investment. There are therefore competing expectations on the defense budget; on the one hand there is an expectation of a "peace dividend" and on the other, an expectation of additional funding to meet the modernizing program.

ZDF is currently dogged by resource constraints to the extent that there is constant disruption in its ability to provide some of the basic needs of its soldiers (e.g. rations, uniforms, medicines), and it cannot engage meaningfully in certain missions (e.g. training). Despite reduction of the ZNA from 51, 000 to 41, 000 in the hope of applying the savings from salaries to meet demands for better weaponry, equipment, and conditions of service in general, there has been an apparent deterioration in the state of such inventory and conditions of service.

ZDF's problems can be traced back to its formation in 1980. The size of the army grew from 15 000 (former Rhodesian Army strength) to about 70 000 but there was no corresponding increase in resources. The majority of the force, especially former guerillas, had not been trained in administration and resource planning and management in a professional military setting. This resulted in a situation where resources were

decreasing at an increasing rate, while they were being managed by people ill-trained for the task of managing them.

The operations that ZDF was engaged in internally and in Mozambique diverted attention from resource management to operations over a long period to the extent that MOD received the worst qualifications from the CAG. The de-escalation of conflict in the early 1990s, however, saw increased attention paid to resource management issues. Unfortunately, this has not translated into a better situation in terms of resource availability for the ZDF task. There is even a bigger challenge to enhance capability through modernization in a deteriorating economic environment. This thesis examined the budgetary process with a view to suggesting alternatives for improving it to meet these challenges.

B. POLICY ASPECTS OF DEFENSE BUDGETING

The thesis reviewed theory on policy aspects of defense budgeting. Discussion on defense policy implications on the budgetary process highlighted the important role that defense forces play in safeguarding national interests, a role they can only play effectively if they have the requisite military capability. Military capability involves readiness (immediate availability of forces to execute their combat missions), modernization (sophistication of forces' weapon systems and equipment), force structure, and sustainability (capacity to maintain military forces performing combat missions over a long period of time). For the purpose of this thesis, modernization assumed a broader definition to include upgrading of all other systems that would result in enhanced capability. Achieving capability involves high levels of investment, hence the inseparability of defense policy from the budget.

The effect of defense expenditure on the economy should be a major concern for policy makers. There is no consensus on the effect that different levels of expenditure have on the economy, but it is generally agreed that "too much" or "too little" is harmful to overall national security interests.

An optimal defense policy would enable the goal of safeguarding national interests feasible without imposing a crippling burden on the economy. Efficient resource planning and management based on sound policies can significantly alleviate

this burden. It is imperative that policy makers in defense should have at their disposal, capacity to conduct effective policy analysis and evaluation. Such capacity would involve skilled staff capable of conducting and interpreting economic and other quantitative analyses, appropriate management information systems, and other resources necessary to perform the task effectively.

The thesis also reviewed the evolution and pros and cons of the following budgeting systems: traditional/incremental, ZBB, performance budgeting, PPBS and MBO. The general shift from the traditional/incremental to other budgeting systems was prompted mostly by the need to move from a control to a performance focus. The contemporary systems have a number of common features, in particular the classification of activities (programs), specification of objectives, and evaluation of efficiency. In contrast with the traditional/incremental, the contemporary systems are much more difficult and costly to administer, but it is considered that the benefits outweigh these shortcomings.

Lessons from government budgetary reforms indicate a general tendency to adopt "a family of systems" in which selected features from different systems are applied depending on their relevance and feasibility. Public management problems are, by their nature, too complex to be solved through the traditional/incremental system. Even non-traditional systems have to be tailored to the requirements of individual organizations.

PPBS was given more attention in the analysis since it was specifically designed for the military, and it encompasses most features of other systems designed to improve efficiency in resource planning and management. As the name implies, PPBS is conducted in three phases: planning, programming and budgeting.

The planning phase involves identification of national interests, examination of the international security environment, defining the military strategy, and planning force structure. The phase culminates in the Secretary of Defense issuing to the services, the Defense Planning Guidance (DPG). The DPG guides the services in developing their programs.

The programming phase translates the DPG into program packages, and is presented in the form of multi-year financial year plans termed, Program Objective Memoranda (POM). An elaborate system of reviewing POM and facilitating approval of

programs by the Defense Resources Planning Board (DRPB) is undertaken and this provides the basis for the budgeting phase.

The budgeting phase relates POM to financial resources available. The results of this phase are submitted to the Office of the Secretary of Defense by the military department, and to the Office of Management and Budget (OMB) for incorporation into the President's Budget. Budget Submitting Offices (BSO) are guided by the Budget Guidance Manual (BGM) and other issue specific memoranda and notices that may be issued from time to time.

The PPBS process emphasizes the role of rational analysis to justify programs. Development of the budget is necessarily an ongoing process that involves planning and review of plans, developing and evaluating programs, reviewing such programs to take into account new DPG, and budgeting. It also involves wide consultation within and outside defense.

C. THE REENGINEERING CONCEPT

The thesis reviewed the concept of process reengineering and how it could help organizations cope with efficiency problems. It was defined as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in performance".

Reengineering involves changing management focus from functions to processes. Reengineered processes are characterized by, among other things, elimination of non-value adding activities, more staff responsibility (employee empowerment), more flexibility in responding to the changing environment, reduction in costly controls, and concern for customers. A major consideration for undertaking reengineering is the desire to achieve "dramatic" rather than "marginal improvements" in performance. Opportunity for reengineering manifests itself in what Hammer and Champy termed "broken processes", "important processes", and "feasible processes".

Success in reengineering depends to a large extent on leadership understanding the full purport of the reengineering concept, and being committed to see it through despite hardships that might have to be endured in the process. Information technology is also critical to the success of reengineering. It is considered as an "essential enabler" to

the process. The rapid changes in technology pose a great challenge to organizations in terms of their response not only to keep-up with the changes, but also with the need to anticipate future changes and position themselves to optimize benefit from such technology.

The thesis then discussed the application of reengineering to the public sector. As new management techniques were developed in the private sector, public sector organizations sought the benefits of improved efficiency by adopting them as well, hence the adoption of TQM and reengineering.

The two techniques are complementary, although they differ in their approach in some respects. Both techniques focus on customer (internal and external) satisfaction, process improvement, developing human resources, and use of technology. TQM, however seeks to achieve mostly incremental changes in the entire organization whereas reengineering seeks "dramatic improvements" and may be implemented on selected processes in the organization. It was argued that more benefits could be achieved by introducing the two, although appropriate implementation strategies would be required to obviate dysfunctional outcomes.

D. ZDF BUDGETARY PROCESS AND THE NEED FOR REENGINEERING

The thesis reviewed and analyzed specific aspects of the ZDF budgetary process and highlighted areas that need improvement. A reengineering model was presented to illustrate how some processes with non-value adding activities could be made more efficient.

The NDP outlines broad objectives for ZDF's role in safeguarding Zimbabwe's national interests. It reaffirms the Zimbabwe's commitment to have a "well-motivated, well-trained and well-equipped defense force". This entails large investment modernizing the ZDF to enhance military capability. At the same time it notes the economic constraints Zimbabwe is currently facing and the, "need to divert financial resources (from defense to other sectors of the economy) in order to meet the basic needs of the people". These seemingly contradictory positions highlight the challenge ZDF faces in resource mobilization.

The structure of the ZDF budget is such that most of its funds go towards salaries. The balance is hardly adequate to fund programs to improve resource availability. In the absence of additional funding, the solution lies in revising force structure and improving resource planning and management.

The ZDF budgetary process works within the regulatory framework of Government's budgetary system. Parliament determines government appropriations while MOF is responsible for the "management and control of public moneys and state property". The Ministry of Defense, as with all other ministries, is bound to operate within the framework of the Treasury managed system which is characterized by centralization, inflexibility, and a predominantly control orientated focus.

Budgetary reforms initiated by Government determine reforms in the ZDF budgetary process. Recent reforms include introduction of the three-year rolling budget system and expenditure controls in the form of expenditure targets and the "stop-payment" system. The changes were motivated by the need to improve planning and cash management. Instead of waiting for government initiated reforms, ZDF's peculiar needs dictate that it evolves internal budget reforms to meet the challenges of ever diminishing resources and the NDP-endorsed need to modernize.

Discussion of ZDF's budgeting policy framework highlighted the need for policy analysis and evaluation, setting of clear objectives, an effective budgeting system, and prospects under the three-year rolling budget.

It is inappropriate for ZDF to continue basing its decision making on an "intuitive" rather than a rational decision making process. It was argued that the former manifests itself in ZDF commitment to unsustainable projects, ineffectiveness in justifying defense requirements, and a perception among its members of a general lack or direction. Current constraints in adopting this approach to decision making include, lack of skilled human resource base (to conduct and interpret quantitative economic and other analyses), poor records management, and insufficient information technology resources. Political, financial, and other considerations could also threaten adoption or effectiveness of this approach. Adoption of this approach needs to be preceded by a strategic planning process to maximize benefit.

It was noted that NDP objectives are too broad upon which to base specific programs. There are other problems with ZDF's objective setting process and they include failure to link mission and objectives with the budget, absence of specific program objectives linked with appropriate funding, and poor consultation.

The effectiveness of ZDF's budgetary process is constrained mostly by its incremental approach and basis on line-items rather than on programs or missions. The incremental approach focuses on control rather than performance. ZDF is in the process of evolving "Defense Management Planning" and "Programming" systems, and a Director General of Programs was appointed to steer introduction of the systems in the organization. This thesis does not base its arguments on these developments since they are not fully operational and cannot therefore, be evaluated effectively.

A Treasury circular calling for estimates from all ministries and providing indicative figures of the amount likely to be allocated triggers the budget formulation process. MOD in turn calls for estimates from department heads in MOD and from the service commanders. Unlike in the PPBS model discussed in this thesis, "planning guidance" or "budget guidance" is not provided to align the requirements from various departments for optimal allocation of resources.

Very little attention is given to revenue budgeting in the ZDF. This could be due to lack of incentive since there are no clear performance parameters for revenue budgets, and no funds directly connected with such revenue are channeled back to the source units. The Defense Procurement Fund provides such an opportunity at the HQ level, and lower levels could similarly benefit. This is likely to improve resource planning and management in general.

The negotiation process effectively starts at Army and Air HQ levels. There is very little consultation with or at lower levels of the organization. The survey conducted among ZDF officers reveals that lower levels are in most cases not even given the opportunity to justify their requirements. Perhaps the gap between requirements and what authorities are prepared to recommend as estimates is too great to render negotiation worthwhile.

Parliamentary involvement in the negotiation process occurs when the Appropriation Bill is presented to the house for debate. The Minister of Defense is

responsible for steering the defense portion of the estimates in Parliament and justifying them to the legislators. Legislators tend to be more concerned with the level of spending relative to other government programs, and MOD's problems in accounting for previous appropriations, rather than with specific programs that MOD proposes.

Most problems in the budgetary process become apparent at the implementation stage. Analysis of implementation was presented in the form of specific ZNA cases to illustrate the general nature of problems in the budgetary process. The major issues are summarized below.

Pay and Records. This case focused on management decisions on staffing and application of information technology. Primary observations from the case are as follows:

- Despite the fact that the major part of ZNA's budget is committed to salaries and allowances, the attention that was paid to the needs of this system did not reflect that fact.
- Determination of the level of staffing was arbitrary rather than being based on job evaluation. The benefits of information technology (particularly saving manpower) were taken for granted and this resulted in the perpetuation of inefficiencies.
- Certain tasks in ZDF can be performed by civilian staff or can be out-sourced to save manpower for traditional military functions.
- Lack of an information technology strategy results in adoption of sub-optimal systems. For example, the pay and records system suffers from over-centralization, lack of proper integration, and poor responsiveness to changes in technology. Consequently, the system has several non-value adding activities and quality of service is compromised.

Purchasing Cycle. The purchasing cycle is governed by government tender rules and the steps involved in the system are also determined by the number of departments that play a role if the cycle. In this case it is the user-department, DP, Finance Branch, MOD (GTC, Accounts Office), GTB, and CPO. Major observations are given below:

- The decisions on advertising and award of formal tenders for all government departments and certain levels of tenders for government enterprises are

centralized at GTB. This results in a lengthy processing cycle and delays in award of tenders.

- While the "Rules for the Procurement of Goods and Services" emphasize the need to procure goods and services with "a maximum of economy and efficiency", in practice emphasis is on "cheapest quote". There is apparent lack of technical capacity to evaluate quality in most cases.
- Lack of information technology to assist in evaluation of tenders, communication, and general procurement administration hinders efficiency.
- Poor financial management systems contribute to inefficiency. For example, officers are reluctant to propose delivery schedules to suppliers for future purchases because funds available at the time the decision is made might not be available when delivery becomes due, yet such an arrangement could make it more efficient for suppliers to meet ZDF's needs at lower prices
- All payments are centralized at CPO. This, the tender system, and number of stages involved in the "order-to-delivery" and "receipt-to-payment" process result in non-value adding departments and activities. (e.g. The vote-control section in DP, current expenditure section in Finance Branch, and the accounts office at MOD basically perform the same function on the same documentation and data.)
- The functions or processes in the departments involved in the cycle are quite amenable to application of information technology. Information technology resources could obviate the number of stages in the cycle, speed up processes and realize significant manpower savings.
- The "stop-payment" control system comes into effect after financial commitment would have been made. Failure to enforce commitment control led to additional controls being instituted instead of dealing with the transgressors. The problem was shifted to suppliers who now have to endure delays in settlement of their bills, and there can be no guessing that they pass on the costs of such inefficiencies to government through their pricing systems.

Human Resources. The amount that ZDF spends on salaries, and the need to motivate members as part of enhancing defense capability, merits more attention on human resource management practices. The general observations are as follows:

- The savings in salaries arising from downsizing need to be properly evaluated and applied to specific programs otherwise they could just fall victim of inefficiencies in the system, and intended benefits would not be realized.
- ZDF needs to keep track of training and development costs and if this is done within the framework of a program or mission based system, it would be easier to monitor relative efficiencies or cost effectiveness among training programs, or to structure programs that are more cost-effective.
- There is need to conduct a skills inventory to determine training needs, evolve cost-effective methods for meeting those needs, and ensure that placement maximizes return from such training investment.
- Research based training could help inculcate a research culture among officers, and when properly reinforced by the organization, could realize invaluable contribution to management in the ZDF.
- Human resources management practices were identified as an area that needs to be improved. Such issues as consistency in promotion policy, equal selection opportunities, recognition of seniority, and performance appraisal were specifically identified.
- Deterioration in conditions of service affect motivation and morale. The likely compromise on readiness is undesirable and negates the effort to modernize ZDF.
- There is lack of equity in conditions of service resulting from resource constraints. (e.g. family accommodation is provided in some units and not in others, subsistence and travel allowances are mostly paid to senior ranks only and not to some junior ranks travelling with them, soldiers in some units contribute to welfare funds and these funds are used to subsidize government funds to pay for such things as minor vehicle repairs, fuel, rations etc.)
- The spin-off effect of good human resource management is that professional and motivated staff is likely to manage other resources well.

Materiel Resources. The following problems were identified:

- Absence of establishment tables showing what equipment and in what quantities each unit is entitled to. Such tables could be based on different levels of resource allocation that would be required to respond to different situations.
- Absence of a multi-year planning and programming system for equipment procurement. There is, however, progress in this direction.
- Absence of a "cradle to grave" management policy and life cycle costing.
- Emphasis on line-item budgeting and absence of performance criteria to measure efficiency in resource procurement and utilization.
- Failure to conduct economic analyses to determine appropriate levels of service support (e.g. spares, maintenance and fuel) for the equipment.
- Poor management controls resulting in inefficient and ineffective use, and misuse or abuse of resources.
- The nature of decision making required for management of such resources, and the sheer volume of transactions make it imperative to employ information technology extensively.

Information Technology. The need to take advantage of information technology pervades the budgetary process as observations made so far confirm. Other general observations are noted below.

- ZDF is still in an era of mainframe-based computing and lags behind many organizations in this respect.
- It has yet to cease the opportunities of global communication trends such as intranet, extranet, internet, and electronic mail.
- A comprehensive information technology strategy is required to cope with the large capital investment that would be required to automate most of its processes and the rapid changes occurring in the technology world.

The review stage in the budgetary process involves a number of stages that require reconciliation due to items in transit. Like the purchasing cycle, it also has a number of non-value adding stages, a problem resulting from placing management focus on functions rather than processes.

At the audit level, the need to enhance capacity to conduct value for money audits is consistent with the performance forecast that this thesis urges. Restructuring the audit function within MOD also merits attention, particularly with a view to streamlining reporting procedures, and introducing a consultancy function.

Survey results validate the concerns about the budgetary process raised in this thesis. It is clear that key stakeholders (i.e. legislators and officers directly involved in the budgetary process) are concerned with the lack of effective consultation in the process. The merit of addressing this concern lies in the logic of getting key stakeholders on board to support programs critical to the organization's mission.

E. RECOMMENDATIONS

This thesis attempted to provide a realistic analysis of the ZDF budgetary process. The process is in serious need of improvements if it is to sustain ZDF's capability to perform its ultimate mission - safeguarding Zimbabwe's national security interests. The pervasive nature of problems in the budgetary process makes it imperative to adopt recommendations at a strategic level rather than mere itemization of individual problems identified. This thesis therefore recommends as follows:

- ZDF should argue for inclusion of defense issues in national development planning as a way of establishing at the planning level, the inevitable link between the defense effort and the economy. All stakeholders, including civil society, should have the opportunity to provide input to national defense policy and assert their role in contributing to national defense. Such an approach would have more chances of success if preceded by a public relations effort that would educate the public about the ZDF's real constraints in safeguarding national interests.
- ZDF should adopt reforms that incorporate aspects of program and mission-based budgeting systems. The new system would be based on clear objectives, rational policy analysis and evaluation in the decision making process, and it would enable ZDF to evaluate performance on the basis of inputs and outcomes of programs related to military missions. Implementation would, however, need to be preceded by an intensive program

to develop appropriate capacity to avoid a "false start". Missions and performance standards and methods must first be developed.

- ZDF should seek the benefits of the strategic planning process and inculcate a strategic planning culture among its department heads and commanders at all levels. This would enable the organization to anticipate problems well in advance and respond appropriately.
- ZDF should evolve an information technology strategy to automate most of its processes, otherwise it will continue to need a lot manpower to perform tasks whose value is not commensurate with the investment in such human resources. Best results are "guaranteed" if implemented together with other management techniques (e.g. TQM, reengineering, and good human resource practices).
- The prevalence of non-value adding activities in the budgetary process, and some evidently "broken down" processes (e.g. soldiers' personal funds used to subsidize government finances) call for "dramatic improvements". Process reengineering is an effective and appropriate technique that ZDF should use to deal with such problems.
- All recommendations, no matter how laudable, cannot be effectively implemented if the human resource base is uncertain. There is need for ZDF to continue to improve its human resource base to keep up with changes in organizational (and business) practices and technology. A skills inventory needs to be conducted and a strategy to deal with deficiencies evolved. Measures should be taken to check the continued deterioration in the quality of working life of ZDF personnel.

F. FURTHER RESEARCH

This study reviewed the ZDF budgetary process in its broadest context. It lays the groundwork for understanding the system as a basis for more detailed study on specific issues. One area that could benefit from such study involves econometric analysis of the impact of current defense expenditures on Zimbabwe's economy, and how various levels of modernization expenditure over different periods of time in the future would also

impact on the economy. The "value of security" could be factored-in, and suggestions for optimal levels of expenditure, consistent with maintaining military capability without jeopardizing economic security, should be made.

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